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*Indian Standard*  
**TABLES FOR CALIBRATION AND  
METHOD OF VERIFICATION OF  
VOLUMETRIC GLASSWARE**

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**INDIAN STANDARDS INSTITUTION**

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

# Indian Standard

## TABLES FOR CALIBRATION AND METHOD OF VERIFICATION OF VOLUMETRIC GLASSWARE

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(Continued on page 2)

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# *Indian Standard*

## TABLES FOR CALIBRATION AND METHOD OF VERIFICATION OF VOLUMETRIC GLASSWARE

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 20 January 1978, after the draft finalized by the Laboratory Glassware and Related Apparatus Sectional Committee had been approved by the Chemical Division Council.

**0.2** This standard has been prepared with a view to providing necessary guidance in the calibration and verification of volumetric glassware using 27°C as the Indian Standard reference temperature. In this standard tables have been compiled to express capacities in terms of cubic centimetres (cm<sup>3</sup>) in keeping with the decisions taken at the Twelfth Conférence Générale des Poids et Mesures held in October 1964. According to this decision the term 'millilitre' should not be used for expressing volumes to high precision, and if at all this term is used, it should be treated only as a special name for cubic centimetre, that is, one millilitre is equal to one cubic centimetre exactly.

**0.3** This standard contains information regarding factors affecting accuracy of volumetric glassware and the basis and data used in the compilation of tables. Procedures based on the use of both water and mercury have been given along with suitable examples showing use of tables and application of corrections for computing capacities at 27°C as reference temperature.

**0.4** Separate tables have been provided for vessels made of glass having coefficients of cubical thermal expansion  $10 \times 10^{-6}/^{\circ}\text{C}$ ,  $15 \times 10^{-6}/^{\circ}\text{C}$ ,  $25 \times 10^{-6}/^{\circ}\text{C}$  and  $30 \times 10^{-6}/^{\circ}\text{C}$  respectively. Tables based on the use of water have been provided for capacities most commonly in use in respect of wares made of glass having coefficients of cubical thermal expansion  $10 \times 10^{-6}/^{\circ}\text{C}$  and  $30 \times 10^{-6}/^{\circ}\text{C}$ . In respect of the remaining two, tables have been provided for capacity of 1 000 cm<sup>3</sup> only.

**0.5** In case of capacities not listed, appropriate values may have to be derived from the tables given in this standard (*see 5.6*). Similarly, in case the coefficient of cubical thermal expansion of the glass of a vessel is known to differ from those used in the tables over the temperature range of 5 to 40°C and the temperature of water is far removed from 27°C, it may be necessary to make an adjustment when working to the limit of accuracy and this may be done by interpolation (*see 5.7*).

**0.5.1** In case it is necessary to compute capacity of a vessel or volume delivered by it at the standard reference temperature of 20°C, suitable correction has to be applied to the value obtained for 27°C (*see 5.8*).

**0.6** In the preparation of this standard, assistance has been derived from the revised fifth draft ISO proposal for 'Method of verification and use of volumetric glassware' issued by the Secretariat of ISO/TC48/SC1 — Volumetric Glassware of the International Organization for Standardization (ISO); BS 1797: 1968 'Tables for use in the calibration of volumetric glassware', issued by the British Standards Institution; and data provided by the National Physical Laboratory (CSIR), New Delhi.

**0.7** In reporting the results of a test made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS : 2-1960\*.

## 1. SCOPE

**1.1** This standard prescribes tables for calibration and method of verification of volumetric glassware by gravimetrically determining capacities in cubic centimetres at the Indian Standard Reference Temperature 27°C, using distilled or deionized water or pure, dry mercury over the temperature range of 5 to 40°C.

## 2. TERMINOLOGY

**2.1** For the purpose of this standard, definitions given in IS : 1382-1961†, in addition to the following, shall apply.

**2.1.1** *Verification* — The process by which the conformity of the individual article with the appropriate standard is determined, culminating in the determination of its errors at one or more points.

## 3. FACTORS AFFECTING THE ACCURACY OF VOLUMETRIC GLASSWARE

**3.0 General** — The sources of error are common to both calibration and verification of volumetric glassware. Therefore, if in the former process every possible attempt is made to reduce these errors to the minimum, in the latter the care needed is dependent upon the degree of accuracy required; when the greatest accuracy is desired, the article should be used, as nearly as possible, in the manner in which it is verified.

### 3.1 Temperature

**3.1.1** *Temperature of Vessel* — The capacity of a glass vessel varies with the change of temperature depending on the coefficient of cubical thermal expansion of glass of which it is made. The coefficient of cubical thermal expansion of glass generally used for the manufacture of volumetric glassware falls in the range approximately  $10 \times 10^{-6}/^{\circ}\text{C}$  and  $30 \times 10^{-6}/^{\circ}\text{C}$ .

\*Rules for rounding off numerical values (*revised*).

†Glossary of terms relating to glass industry.



NOTE — It follows that the standardization temperature is of little importance in the use of a vessel. A vessel made of glass having coefficient of cubical thermal expansion  $30 \times 10^{-6}/^{\circ}\text{C}$  and calibrated at  $27^{\circ}\text{C}$  but used at  $20^{\circ}\text{C}$ , would, at the temperature of use, show an extra error of only 0.02 percent which is much smaller than the tolerance that is prescribed on capacities of most volumetric glassware. But at the same time it is important to specify a standard reference temperature in order to provide a sound basis of calibration or verification of a vessel.

**3.1.2 Temperature of Liquid** — The coefficient of cubical thermal expansion of the liquid, which is measured, is much greater than that of glass. The coefficient for water is about  $2 \times 10^{-4}/^{\circ}\text{C}$ , in the temperature range covered, and that for organic liquids such as alcohol is about  $10^{-3}/^{\circ}\text{C}$ .

NOTE — It follows that for calibration and verification of volumetric glassware, the temperature of water, for example, should be measured, and appropriate corrections applied. It means that one should ensure that all solutions used in connection with one another are close to the same temperature (in relation to the accuracy required) at the time of measuring their volumes.

For example, if a pipette, calibrated at any reference temperature, is used to measure out two samples of the same aqueous solution at two temperatures differing by  $7^{\circ}\text{C}$ , the two samples will contain the masses of solute which will differ by about 0.12 percent; and this will show itself in the process of titration as an apparent difference in concentration.

**3.2 Cleanliness of Glass Surface** — The volume contained in or delivered by a glass vessel depends on the cleanliness of its internal surface. Lack of cleanliness can give rise to errors through a badly shaped meniscus involving two defects, namely, incomplete wetting of glass surface; and a generally increased radius of curvature, due to contamination of the liquid surface reducing the surface tension.

**3.2.1** In vessels used for delivering, lack of cleanliness can cause additional errors due to the film of liquid on the walls being irregularly distributed or incomplete.

NOTE — In use, as distinct from calibration or verification, chemical contamination can introduce an error even though it has no influence on the accuracy of volume measurement. Therefore, where vessels are fitted with ground stoppers, special care should be taken to cleaning the ground zone.

**3.2.2** To ascertain whether a piece of glass apparatus is satisfactorily clean, it should be observed during filling. A delivery vessel should preferably be filled from below the meniscus. The rising liquid meniscus should not change shape; that is, it should not crinkle at its edges. After over-filling and withdrawing a little liquid (through the jet in the case of a delivery vessel and by means of a drawn-down glass tube in the case of content vessel) the surface of the glass above should remain uniformly wetted and the meniscus should not crinkle at its edges. Additionally, an experienced operator can recognize the shape of an uncontaminated meniscus, in relation to its diameter.

**3.2.3** A suitable method of cleaning volumetric glassware is described in 5.1.1.

**3.3 Setting of Meniscus** — In this standard two methods of setting the meniscus have been included. In one, the plane of the top edge of the graduation line and in the other the plane at the centre of the graduation line, is the reference plane. If the two methods are used indiscriminately an error will be made equivalent to the volume occupied by a cylinder having a height equal to half the thickness of the graduation line and a cross-section equal to that of the article at the graduation line. The error is not significant except for work of greatest accuracy; in the case of certain flasks, for example, it may amount to about one-half the Class A tolerance on capacity if the graduation line is thick. Therefore, in the case of vessels such as volumetric flasks and one-mark pipettes where volume measurement is made by a single meniscus setting, the method of setting meniscus may be stated, and carried out in the way generally used in the country for which the article is meant, particularly for Class A volumetric glassware.

NOTE — In case of vessels such as burettes where the volume is measured, by difference no error is incurred provided that a consistent method of setting the meniscus is adopted.

**3.3.1** To make an accurate setting of the meniscus, the lighting should be arranged so that the meniscus appears dark and distinct in outline. For this purpose it should be viewed against a white background and shaded from undesirable illumination. This can be achieved, for example, by securing a strip of black paper round the vessel, not more than 1 mm below the level of the setting, or by using a short section of thick black rubber tubing cut open at one side and of such a size as to clasp the tube firmly.

**3.3.2** Parallax is avoided in both methods of setting the meniscus when the graduation lines are of sufficient length to be seen at the front and back of the vessel simultaneously. On apparatus provided with graduation lines on the front only, parallax can be made negligible when making a setting on the top edge of the line by using the black shading strip, taking care that the top edge of this is in a horizontal plane. In this case the eye should be placed so that the front and back portions of the top edge appear to be coincident.

**3.4 Time of Delivery** — For articles used for delivery of a liquid, the volume delivered is always less than the volume contained due to the film of liquid left on the walls of the vessel. The volume of this film depends on the time taken to deliver the liquid, and the volume delivered decreases with decreasing delivery time. Therefore, such a vessel can deliver a particular volume for only one value of the delivery time. The shorter the delivery time, the greater is the variation in the volume delivered due to the small variations in delivery time which inevitably occur. Provided that the delivery time is never less than a certain value, the volume of the residual film is sufficiently small to ensure that departures from the nominal delivery time which occur in practice have a negligible effect on the volume delivered and that drainage occurring after delivery is negligibly

small. The same effect may be achieved by splitting time into a reasonably shorter delivery time and a definite waiting time.

**3.4.1** It follows that the jet should not be interfered with. Any alteration of the jet in order to increase the speed of delivery will cause the scale readings to be in error as well as decrease the consistency of reading. Delivery time ranges should, therefore, be specified so that no reasonable differences in volume will appear if the actual delivery time varies in that range on account of, for example, traces of dust.

**3.4.2** Nevertheless as a safeguard, the delivery time is often marked on, burettes and pipettes made to Class A tolerances to enable the user to check whether the jet has become blocked or damaged, by measuring the delivery time for himself and comparing his result with the marked delivery time. This inscription is required by legal metrology in some countries.

#### 4. TABLES FOR CALIBRATION OF VOLUMETRIC GLASSWARE

**4.0 General** — These tables relate to vessels made of glass having coefficients of cubical thermal expansion ( $\alpha$ ) as follows:

$10 \times 10^{-6}/^{\circ}\text{C}$  for Tables 1A, 3A and 4A

$15 \times 10^{-6}/^{\circ}\text{C}$  for Tables 1B, 3B and 4B

$25 \times 10^{-6}/^{\circ}\text{C}$  for Tables 1C, 3C and 4C

$30 \times 10^{-6}/^{\circ}\text{C}$  for Tables 1D, 3D and 4D

NOTE — These values have been adopted in accordance with the agreement reached in the eighth meeting of ISO/TC48 in October 1962 and the ninth meeting in June 1964.

**4.1 Scope of Operations** — Each set of these tables is appropriate to the following operations:

- a) Conversion of the observed mass, in grams, in air of average density, of the pure water contained or delivered by a glass vessel at a known temperature to the capacity in  $\text{cm}^3$  of the vessel at  $27^{\circ}\text{C}$  (see Tables 1A, 1B, 1C and 1D).
- b) Correction for the departure of the effective air density from the average air density assumed in Tables 1A to 1D (see Table 2).

NOTE 1 — The correction from Table 2 need only be applied when high accuracy is desired. The values given shall apply to vessels made of any glass.

NOTE 2 — Table 2 has been formulated for use in conjunction with air pressure measurements made in terms of the commonly used conventional millimetres of mercury, mmHg (1 mmHg is the pressure exerted by a column of mercury 1 millimetre high where gravity is  $979.1387 \text{ cm/s}^2$ \* and the mercury has a density of  $13.5951 \text{ g/cm}^3$  at  $0^{\circ}\text{C}$ . Conversion to the SI unit of pressure, Newton per square metre ( $\text{N/m}^2$ ) or its multiple, the bar, involves the following relationship:

$$(1 \text{ mmHg} = 133.115 \text{ N/m}^2 = 0.00133115 \text{ bar}).$$

- c) Conversion of the observed mass of mercury in grams, in air of average density, contained in or delivered by a glass vessel at a

\*See ISI Bul; Vol 18, No. 10, P 461.

known temperature to the capacity of the vessel in  $\text{cm}^3$  at  $27^\circ\text{C}$  (see Tables 3A, 3B, 3C and 3D).

- d) Conversion of the nominal capacity of a glass vessel in  $\text{cm}^3$  at  $27^\circ\text{C}$  to the mass, in air of average density, of mercury contained or delivered by it at various temperatures (see Tables 4A, 4B, 4C and 4D).

## 4.2 Basis of Tables

**4.2.0 General** — The tables take into account the current density of the liquid, change of capacity of the vessel with temperature and the buoyancy of air during weighing. The full basis of the tables is given below.

**4.2.1 Tables 1A, 1B, 1C, 1D and 2 — Calibration with Water** — When weighing a quantity of water at  $t^\circ\text{C}$ , equilibrium is expressed by

$$M - \frac{M\sigma}{\Delta} = V_t\rho_t - V_t\sigma \quad \dots (1)$$

where

$M$  = apparent mass in g of the water in air,

$\sigma$  = density in  $\text{g}/\text{cm}^3$  of the air at the time of weighing,

$\Delta$  = density in  $\text{g}/\text{cm}^3$  of the material of which the weights are made,

$V_t$  = volume in  $\text{cm}^3$  of the water, and

$\rho_t$  = density in  $\text{g}/\text{cm}^3$  of the water.

If  $\alpha$  = coefficient of cubical thermal expansion of the glass of the vessel (per degree Celsius), the capacity of the vessel at  $27^\circ\text{C}$   $V_{27}$ , is given by

$$V_{27} = V_t / \{1 + \alpha(t - 27)\} \quad \dots (2)$$

Hence if  $C$  is the correction to be added to  $M$  to obtain  $V_{27}$ ,

$$C = V_{27} - M, \text{ or}$$

$$C = +V_{27} \left[ 1 - \frac{\{1 + \alpha(t - 27)\} (\rho_t - \sigma) \Delta}{\Delta - \sigma} \right] \quad \dots (3)$$

**4.2.1.1** Tables 1A, 1B, 1C and 1D are based on expression (3) with the assumption of an average value of  $\sigma$  (see below). When the air density is not  $\sigma$  but  $\sigma_1$ , it can be seen from (3) that the small additional correction  $c$  required is:

$$\begin{aligned} c &= V_{27} \{1 + \alpha(t - 27)\} \Delta \left\{ \frac{\rho_t - \sigma}{\Delta - \sigma} - \frac{\rho_t - \sigma_1}{\Delta - \sigma_1} \right\} \\ &= V_{27} \{1 + \alpha(t - 27)\} \frac{\Delta (\Delta - \rho_t)}{(\Delta - \sigma) (\Delta - \sigma_1)} (\sigma_1 - \sigma) \end{aligned}$$

which without significant loss of accuracy, since  $c$  is very much smaller than  $C$ , reduces to

$$c = + V_{27} \left( 1 - \frac{1}{\Delta} \right) (\sigma_1 - \sigma) \quad \dots (4)$$

**4.2.2 Tables 3 and 4—Calibration with Mercury**—From equation (1), where the liquid is now mercury,

$$V_t = M \left( 1 - \frac{\sigma}{\Delta} \right) / (\rho_t - \sigma)$$

and therefore from equation (2),

$$V_{27} = M \left( 1 - \frac{\sigma}{\Delta} \right) / (\rho_t - \sigma) \{1 + \alpha (t - 27)\}$$

that is, as a very close approximation,

$$\begin{aligned} V_{27} &= \frac{M}{\rho_t} \left( 1 - \frac{\sigma}{\Delta} + \frac{\sigma}{\rho_t} \right) \{1 - \alpha (t - 27)\} \quad \dots (5) \\ &= MF \end{aligned}$$

where

$$F = \left( 1 - \frac{\sigma}{\Delta} + \frac{\sigma}{\rho_t} \right) \{1 - \alpha (t - 27)\} / \rho_t.$$

**4.2.2.1 Tables 3A, 3B, 3C and 3D** give values of  $F$  and Tables 4A, 4B, 4C and 4D reciprocals of  $F$ .

**4.3 Numerical Data**—The numerical data used in the preparation of these tables is as follows:

- a)  $\rho_t$  = Density. In the case of water the values relate to distilled water and are based on Chappius' data as recalculated by Tilton and Taylor (N.B.S. Research Paper RP 971, p 213, part of *J. Res. N.B.S.*, **18**, 1937). As the figures given by Tilton and Taylor are in terms of g/ml (taking the 1901 definition of the 'litre') they are divided by 1.000 028 to convert to g/cm<sup>3</sup>. In the case of mercury, the values used are based on the mean value of 13.528 727 g/cm<sup>3</sup> at 27°C determined by Cook (1961; *Phil. Trans. Roy. Soc. A.*, 254, 125) and the expansion formula of Beattie et al (1941, *Proc. Amer. Acad. Arts. Sci.*, **71**, 371);
- b)  $\sigma$  = 0.001 167 g/cm<sup>3</sup> (that is, where  $p=760$  and  $t=27$  in the formula given below);
- c)  $\sigma_1$  =  $(0.001\,290\,75p - 0.000\,244\,0h) / 760 (1.000\,028) (1 + 0.003\,67t)$  g/cm<sup>3</sup>;

where

$p$  = barometric pressure in mm of mercury (mmHg),  
and

$h$  = vapour pressure of water mm of mercury corresponding to the temperature  $t^{\circ}\text{C}$ . The air is assumed to be semi-saturated with water vapour and to contain 0.04 percent  $\text{CO}_2$  by volume;

d)  $\Delta$  =  $8.4 \text{ g/cm}^3$ . This value applies to plain or plated brass weights and those of nickel-chromium (80 percent Ni, 20 percent Cr). Stainless steel weights ( $8.0 \text{ g/cm}^3$ .) may be used without significant error; and

e)  $\alpha$  =  $10 \times 10^{-6}/^{\circ}\text{C}$  for Tables 1A, 3A and 4A  
 $15 \times 10^{-6}/^{\circ}\text{C}$  for Tables 1B, 3B and 4B  
 $25 \times 10^{-6}/^{\circ}\text{C}$  for Tables 1C, 3C and 4C  
 $30 \times 10^{-6}/^{\circ}\text{C}$  for Tables 1D, 3D and 4D.

## 5. VERIFICATION AND USE OF TABLES

**5.0 General** — Verification is carried out gravimetrically using distilled or deionized water (*see* IS : 1070-1977\*) or pure dry mercury.

### 5.1 Procedure

**5.1.1 Cleaning of Volumetric Glassware** — Remove obviously loose contamination mechanically from the vessel by brushing, shaking with water (if necessary, containing pieces of filter paper). Remove oil or grease by suitable solvents. Nearly fill the vessel with an aqueous solution of a soapless detergent, and shake vigorously. Then repeatedly rinse with tap water until traces of the detergent are removed. Finally rinse with distilled or deionized water. Verify in the way described in 3.2.2 that the walls of the vessel are clean.

**5.1.1.1** If the walls are not satisfactorily clean after the above treatment fill the vessel with a mixture of equal parts by volume of saturated solution of potassium dichromate and concentrated sulphuric acid, and allow to stand for several hours. Take care that the acid does not come in contact with the outside of the vessel, unless it is known that the filling of the graduation marks is resistant to it. Rinse the vessel again with tap water until traces of acid are removed. Finally rinse with distilled or deionized water and again verify that the walls are clean; if they are not, repeat the procedure.

**5.1.1.2** After cleaning, rinse the vessel, adjusted to contain, with ethyl alcohol and dry with clean air at room temperature. Alternatively, if the vessel is not required for immediate use, it may be kept filled with distilled or deionized water. It is not necessary to dry a vessel marked 'TO DELIVER'.

\*Specification for water for general laboratory use (*second revision*).

**5.2 Procedure Based on the Use of Water** — Accurately weigh the vessel to be verified, or a weighing bottle, if the vessel is intended for delivery, that is, to a precision better than 10 percent of the tolerance laid down.

**5.2.1** Make sure that the vessel or weighing bottle and water are at room temperature and that the water is not contaminated by grease used in stopcocks, etc, or by a residue of the material used for cleaning and/or drying the walls of the vessel.

**5.2.2** Fill the vessel, adjusted to contain, with distilled or deionized water, to a distance of a few millimetres above the graduation line to be tested, and make the final setting of the meniscus to the line by withdrawing the surplus water by means of a glass tube drawn-down to a jet or in the case of pipettes adjusted to contain, by means of filter paper. Alternatively, wet the walls of the vessel completely for a considerable distance above the graduation line to be tested. Fill the vessel to a few millimetres below the graduation line by running water down the wetted wall of the neck. Observe two minutes drainage time and then make the final setting by discharging the required water against the wall about one centimetre above the graduation line and rotating the vessel to re-wet the wall uniformly.

**5.2.3** Clamp the vessel, adjusted to deliver, in a vertical position and fill to a few millimetres above the graduation line to be tested; remove any liquid remaining on the outside of the jet. Then make the setting by running out the surplus water through the jet. Remove any drop of liquid adhering to the jet by bringing an inclined glass surface into contact with the tip of the jet. Deliver water into the tared weighing bottle with the flow unrestricted.

**5.2.4** Weigh the filled vessel or the weighing bottle to the same accuracy as in **5.2** and measure the temperature of the water using a thermometer accurate to  $0.1^{\circ}\text{C}$  (see Schedule Mark 22 of IS : 4825-1968\*) by inserting it in the filled vessel or the weighing bottle, after weighing.

**5.3 Procedure Based on the Use of Mercury** — Pure, dry mercury may be used for vessels of small capacity, following the procedure detailed in **5.2**, and also keeping in view the physical properties of the two liquids.

## 5.4 Calculation

**5.4.1** The difference between the results of the first (**5.2**) and the second (**5.2.4**) weighings is the mass of water contained in or delivered by the vessel under verification. In order to obtain the volume at the standard reference temperature  $27^{\circ}\text{C}$  from this mass of water take a figure, appropriate to the measured temperature of water (**5.2.4**) and the coefficient of cubical thermal expansion of glass of which the vessel is made, from Tables 1A, 1B, 1C or 1D as the case may be.

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\*Specification for laboratory and reference thermometers.

**5.4.1.1** Take an additional figure from Table 2, as appropriate, to allow for the departure of the actual density of air from the average (see 5.5.1).

**5.4.2** In order to obtain the volume at the standard reference temperature 27°C from the mass of mercury contained in or delivered by the vessel, multiply this value by the factor, appropriate to the measured temperature of mercury and the coefficient of cubical thermal expansion of glass of which the vessel is made, from Tables 3A, 3B, 3C or 3D as the case may be (see 5.5.2).

**5.4.2.1** In order to verify a result obtained by using mercury, multiply the value by the factor, appropriate to the measured temperature of mercury and the coefficient of cubical thermal expansion of glass of which the vessel is made, from Tables 4A, 4B, 4C or 4D (see 5.5.3).

## 5.5 Examples for Use of Tables

**5.5.1** *Test for a 1 000 cm<sup>3</sup> Vessel with Distilled or Deionized Water* — Suppose the coefficient of cubical thermal expansion of the glass of the vessel is  $10 \times 10^{-6}/^{\circ}\text{C}$ ; and

Mass of water in grams	=	996.84
Temperature of water	= 21.5°C ∴ C = (+)3.20 (Table 1A/1 000)	
Ambient temperature	= 21.5°C	
Pressure, mmHg	= 750 ∴ c = (+)0.01 (Table 2/1 000)	

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$$\therefore \text{Capacity of vessel at } 27^{\circ}\text{C} = 1\,000.05 \text{ cm}^3$$


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**5.5.2** *Test for a 10 cm<sup>3</sup> Vessel with Mercury* — Suppose the coefficient of cubical thermal expansion of the glass of the vessel is  $30 \times 10^{-6}/^{\circ}\text{C}$ ; and

Mass of mercury in grams	=	135.57
Temperature of mercury	= 15°C	
So the multiplying factor at 15°C to convert mass of mercury in air into capacity of vessel at 27°C	=	0.073 779 (Table 3D)

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$$\therefore \text{Capacity of vessel at } 27^{\circ}\text{C} = 10.002\,2 \text{ cm}^3$$


---

**5.5.3** *Graduation of a 5 mm<sup>3</sup> Vessel Using Mercury* — Suppose the coefficient of cubical thermal expansion of the glass of the vessel is  $10 \times 10^{-6}/^{\circ}\text{C}$ ; and

Nominal capacity of the vessel at 27°C	=	5 cm <sup>3</sup>
Multiplying factor to convert nominal capacity at 27°C into required mass in air of the mercury at 15°C	=	13.557 (Table 4A)

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$$\therefore \text{Mass in air of mercury at } 15^{\circ}\text{C} = 67.785 \text{ g}$$


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**5.6 Correction for Capacities not Listed in the Tables** — Values for vessels of capacities not listed in the tables may be derived by proportion from appropriate tables. For many capacities this may be done simply by moving the decimal point; for example, values for capacity  $0.7 \text{ cm}^3$  for a vessel made of glass having coefficient of cubical thermal expansion  $10 \times 10^{-6}/^\circ\text{C}$ , may be derived from Tables 1A/70 and 2/70 respectively by moving the decimal point to the left by one place.

**5.7 Correction for Glass Having Intermediate Coefficient of Cubical Thermal Expansion** — When the coefficient of cubical thermal expansion of the glass of the vessel over the temperature range of 5 to  $40^\circ\text{C}$  is known to differ from that used in the tables and the temperature of water is far removed from  $27^\circ\text{C}$ , it may be necessary, when working to the limit of accuracy, to make an adjustment. A comparison of the corresponding entries for the appropriate capacity and temperature in tables for various glasses will indicate the effect of the difference between the coefficients of cubical thermal expansion  $10 \times 10^{-6}$  and  $30 \times 10^{-6}$  per degree Celsius. If this shows that an adjustment would be significant, the correction appropriate to the glass concerned may be obtained by linear interpolation between the two entries.

**5.8 Correction for Standard Reference Temperature of  $20^\circ\text{C}$**  — When it is necessary in cold countries to work at an ambient temperature considerably below  $27^\circ\text{C}$ , and these countries do not wish to use the standard reference temperature of  $27^\circ\text{C}$ , it is recommended that they should adopt a temperature of  $20^\circ\text{C}$ .

**5.8.1** The effect of lowering the temperature of a soda glass vessel from 27 to  $20^\circ\text{C}$  is to decrease its capacity by about 1 part in 5 000, and is negligible for most types of volumetric glassware. Where such effect is significant, the capacity of a vessel at  $20^\circ\text{C}$  may be obtained from its capacity at  $27^\circ\text{C}$  by subtracting the following depending upon the coefficient of cubical thermal expansion:

<i>Coefficient of Cubical Thermal Expansion of Glass Vessel</i>	<i>Correction Applicable per Cubic Centimetre Volume of the Vessel</i>
$10 \times 10^{-6}/^\circ\text{C}$	(—) $0.000\ 070 \text{ cm}^3$
$15 \times 10^{-6}/^\circ\text{C}$	(—) $0.000\ 105 \text{ cm}^3$
$25 \times 10^{-6}/^\circ\text{C}$	(—) $0.000\ 175 \text{ cm}^3$
$30 \times 10^{-6}/^\circ\text{C}$	(—) $0.000\ 210 \text{ cm}^3$

Thus the correction for a  $1\ 000 \text{ cm}^3$  vessel made of glass having a coefficient of cubical thermal expansion  $10 \times 10^{-6}/^\circ\text{C}$  is  $-0.07 \text{ cm}^3$ . This correction is, of course, applied after the capacity at  $27^\circ\text{C}$  has been obtained by the application of the corrections in the appropriate Tables 1A to 1D and Table 2, or the factor given in Tables 3A to 3D.

**5.8.2** With regard to Tables 4A to 4D, the mass of the mercury contained or delivered at  $t^{\circ}\text{C}$  by a vessel of capacity  $1\text{ cm}^3$  at  $20^{\circ}\text{C}$  may be obtained by adding to the tabulated mass of mercury the following values:

*Coefficient of Cubical  
Thermal Expansion of  
Glass Vessel*

*Correction Applicable per  
Cubic Centimetre Volume of  
the Vessel*

$10 \times 10^{-6}/^{\circ}\text{C}$

0.001 g

$15 \times 10^{-6}/^{\circ}\text{C}$

0.001 5 g

$25 \times 10^{-6}/^{\circ}\text{C}$

0.002 5 g

$30 \times 10^{-6}/^{\circ}\text{C}$

0.003 g

TABLE 1A/5

NOMINAL CAPACITY 5 cm<sup>3</sup>

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$ .

TEMPERATURE OF WATER $t^{\circ}\text{C}$	NOMINAL CAPACITY, cm <sup>3</sup>					TEMPERATURE OF WATER $t^{\circ}\text{C}$
	1	2	3	4	5	
5	0.001 3	0.002 6	0.003 9	0.005 1	0.006 4	5
6	0.001 3	0.002 6	0.003 9	0.005 2	0.006 5	6
7	0.001 3	0.002 7	0.004 0	0.005 3	0.006 6	7
8	0.001 4	0.002 7	0.004 1	0.005 5	0.006 8	8
9	0.001 4	0.002 9	0.004 3	0.005 7	0.007 1	9
10	0.001 5	0.003 0	0.004 5	0.006 0	0.007 5	10
11	0.001 6	0.003 2	0.004 7	0.006 3	0.007 9	11
12	0.001 7	0.003 4	0.005 0	0.006 7	0.008 4	12
13	0.001 8	0.003 6	0.005 4	0.007 2	0.009 0	13
14	0.001 9	0.003 8	0.005 7	0.007 7	0.009 6	14
15	0.002 0	0.004 1	0.006 1	0.008 2	0.010 2	15
16	0.002 2	0.004 4	0.006 6	0.008 8	0.011 0	16
17	0.002 4	0.004 7	0.007 1	0.009 4	0.011 8	17
18	0.002 5	0.005 0	0.007 6	0.010 1	0.012 6	18
19	0.002 7	0.005 4	0.008 1	0.010 8	0.013 5	19
20	0.002 9	0.005 8	0.008 7	0.011 6	0.014 5	20
21	0.003 1	0.006 2	0.009 3	0.012 4	0.015 5	21
22	0.003 3	0.006 6	0.009 9	0.013 2	0.016 5	22
23	0.003 5	0.007 1	0.010 6	0.014 1	0.017 6	23
24	0.003 8	0.007 5	0.011 3	0.015 0	0.018 8	24
25	0.004 0	0.008 0	0.012 0	0.016 0	0.020 0	25
26	0.004 3	0.008 5	0.012 8	0.017 0	0.021 3	26
27	0.004 5	0.009 0	0.013 5	0.018 1	0.022 6	27
28	0.004 8	0.009 6	0.014 3	0.019 1	0.023 9	28
29	0.005 1	0.010 1	0.015 2	0.020 2	0.025 3	29
30	0.005 3	0.010 7	0.016 0	0.021 4	0.026 7	30
31	0.005 6	0.011 3	0.016 9	0.022 6	0.028 2	31
32	0.005 9	0.011 9	0.017 8	0.023 8	0.029 7	32
33	0.006 3	0.012 5	0.018 8	0.025 1	0.031 3	33
34	0.006 6	0.013 2	0.019 8	0.026 3	0.032 9	34
35	0.006 9	0.013 8	0.020 7	0.027 7	0.034 6	35
36	0.007 3	0.014 5	0.021 8	0.029 0	0.036 3	36
37	0.007 6	0.015 2	0.022 8	0.030 4	0.038 0	37
38	0.008 0	0.015 9	0.023 9	0.031 8	0.039 8	38
39	0.008 3	0.016 6	0.024 9	0.033 2	0.041 6	39
40	0.008 7	0.017 4	0.026 0	0.034 7	0.043 4	40

**TABLE 1A/6**  
**NOMINAL CAPACITY 6 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
(in conjunction with Table 2/6).

TEMPERATURE OF WATER			TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5	$t^{\circ}\text{C}$	0.0	0.5
5	0.008	0.008	23	0.021	0.022
6	0.008	0.008	24	0.023	0.023
7	0.008	0.008	25	0.024	0.025
8	0.008	0.008	26	0.026	0.026
9	0.009	0.009	27	0.027	0.028
10	0.009	0.009	28	0.029	0.030
11	0.009	0.010	29	0.030	0.031
12	0.010	0.010	30	0.032	0.033
13	0.011	0.011	31	0.034	0.035
14	0.011	0.012	32	0.036	0.037
15	0.012	0.013	33	0.038	0.039
16	0.013	0.014	34	0.040	0.040
17	0.014	0.015	35	0.041	0.042
18	0.015	0.016	36	0.044	0.045
19	0.016	0.017	37	0.046	0.047
20	0.017	0.018	38	0.048	0.049
21	0.019	0.019	39	0.050	0.051
22	0.020	0.020	40	0.052	0.053

**TABLE 2/6**  
**NOMINAL CAPACITY 6 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR, $^{\circ}\text{C}$	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	0.000	0.000	0.000	+0.001	+0.001	+0.001	+0.001
10	0.000	0.000	0.000	0.000	0.000	+0.001	+0.001
15	0.000	0.000	0.000	0.000	0.000	0.000	+0.001
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	−0.001	0.000	0.000	0.000	0.000	0.000	0.000

**TABLE 1A/7**  
**NOMINAL CAPACITY 7 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/7).

TEMPERATURE OF WATER			TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5	$t^{\circ}\text{C}$	0.0	0.5
5	0.009	0.009	23	0.025	0.025
6	0.009	0.009	24	0.026	0.027
7	0.009	0.009	25	0.028	0.029
8	0.010	0.010	26	0.030	0.031
9	0.010	0.010	27	0.032	0.033
10	0.010	0.011	28	0.033	0.034
11	0.011	0.011	29	0.035	0.036
12	0.012	0.012	30	0.037	0.038
13	0.013	0.013	31	0.040	0.041
14	0.013	0.014	32	0.042	0.043
15	0.014	0.015	33	0.044	0.045
16	0.015	0.016	34	0.046	0.047
17	0.016	0.017	35	0.048	0.050
18	0.018	0.018	36	0.051	0.052
19	0.019	0.020	37	0.053	0.054
20	0.020	0.021	38	0.056	0.057
21	0.022	0.022	39	0.058	0.059
22	0.023	0.024	40	0.061	0.062

**TABLE 2/7**  
**NOMINAL CAPACITY 7 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR, $^{\circ}\text{C}$	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	0.000	0.000	+0.001	+0.001	+0.001	+0.001	+0.001
10	0.000	0.000	0.000	0.000	+0.001	+0.001	+0.001
15	0.000	0.000	0.000	0.000	0.000	+0.001	+0.001
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	−0.001	−0.001	0.000	0.000	0.000	0.000	0.000

**TABLE 1A/8**  
**NOMINAL CAPACITY 8 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
(in conjunction with Table 2/8).

TEMPERATURE OF WATER			TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5	$t^{\circ}\text{C}$	0.0	0.5
5	0.010	0.010	23	0.028	0.029
6	0.010	0.010	24	0.030	0.031
7	0.011	0.011	25	0.032	0.033
8	0.011	0.011	26	0.034	0.035
9	0.011	0.012	27	0.036	0.037
10	0.012	0.012	28	0.038	0.039
11	0.013	0.013	29	0.040	0.042
12	0.013	0.014	30	0.043	0.044
13	0.014	0.015	31	0.045	0.046
14	0.015	0.016	32	0.048	0.049
15	0.016	0.017	33	0.050	0.051
16	0.018	0.018	34	0.053	0.054
17	0.019	0.019	35	0.055	0.057
18	0.020	0.021	36	0.058	0.059
19	0.022	0.022	37	0.061	0.062
20	0.023	0.024	38	0.064	0.065
21	0.025	0.026	39	0.066	0.068
22	0.026	0.027	40	0.069	0.071

**TABLE 2/8**  
**NOMINAL CAPACITY 8 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR, $^{\circ}\text{C}$	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	0.000	0.000	+0.001	+0.001	+0.001	+0.001	+0.001
10	0.000	0.000	0.000	+0.001	+0.001	+0.001	+0.001
15	0.000	0.000	0.000	0.000	0.000	+0.001	+0.001
20	0.000	0.000	0.000	0.000	0.000	0.000	+0.001
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	−0.001	0.000	0.000	0.000	0.000	0.000	0.000
40	−0.001	−0.001	−0.001	0.000	0.000	0.000	0.000

TABLE 1A/9

NOMINAL CAPACITY 9 cm<sup>3</sup>

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/9).

TEMPERATURE OF WATER			TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5	$t^{\circ}\text{C}$	0.0	0.5
5	0.012	0.012	23	0.032	0.033
6	0.012	0.012	24	0.034	0.035
7	0.012	0.012	25	0.036	0.037
8	0.012	0.013	26	0.038	0.039
9	0.013	0.013	27	0.041	0.042
10	0.013	0.014	28	0.043	0.044
11	0.014	0.015	29	0.046	0.047
12	0.015	0.016	30	0.048	0.049
13	0.016	0.017	31	0.051	0.052
14	0.017	0.018	32	0.054	0.055
15	0.018	0.019	33	0.056	0.058
16	0.020	0.020	34	0.059	0.061
17	0.021	0.022	35	0.062	0.064
18	0.023	0.023	36	0.065	0.067
19	0.024	0.025	37	0.068	0.070
20	0.026	0.027	38	0.072	0.073
21	0.028	0.029	39	0.075	0.076
22	0.030	0.031	40	0.078	0.080

TABLE 2/9

NOMINAL CAPACITY 9 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (—) from it.

TEMPERATURE OF AIR, $^{\circ}\text{C}$	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	0.000	+0.001	+0.001	+0.001	+0.001	+0.001	+0.001
10	0.000	0.000	0.000	+0.001	+0.001	+0.001	+0.001
15	0.000	0.000	0.000	0.000	+0.001	+0.001	+0.001
20	0.000	0.000	0.000	0.000	0.000	0.000	+0.001
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	—0.001	—0.001	0.000	0.000	0.000	0.000	0.000
40	—0.001	—0.001	—0.001	0.000	0.000	0.000	0.000

TABLE 1A/10

NOMINAL CAPACITY 10 cm<sup>3</sup>

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/10).

TEMPERATURE OF WATER			TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5	$t^{\circ}\text{C}$	0.0	0.5
5	0.013	0.013	23	0.035	0.036
6	0.013	0.013	24	0.038	0.039
7	0.013	0.013	25	0.040	0.041
8	0.014	0.014	26	0.043	0.044
9	0.014	0.015	27	0.045	0.046
10	0.015	0.015	28	0.048	0.049
11	0.016	0.016	29	0.051	0.052
12	0.017	0.017	30	0.053	0.055
13	0.018	0.019	31	0.056	0.058
14	0.019	0.020	32	0.059	0.061
15	0.020	0.021	33	0.063	0.064
16	0.022	0.023	34	0.066	0.067
17	0.024	0.024	35	0.069	0.071
18	0.025	0.026	36	0.073	0.074
19	0.027	0.028	37	0.076	0.078
20	0.029	0.030	38	0.080	0.081
21	0.031	0.032	39	0.083	0.085
22	0.033	0.034	40	0.087	0.089

TABLE 2/10

NOMINAL CAPACITY 10 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR, $^{\circ}\text{C}$	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	0.000	+0.001	+0.001	+0.001	+0.001	+0.001	+0.001
10	0.000	0.000	+0.001	+0.001	+0.001	+0.001	+0.001
15	0.000	0.000	0.000	0.000	+0.001	+0.001	+0.001
20	0.000	0.000	0.000	0.000	0.000	+0.001	+0.001
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	−0.001	0.000	0.000	0.000	0.000	0.000	0.000
35	−0.001	−0.001	0.000	0.000	0.000	0.000	0.000
40	−0.001	−0.001	−0.001	−0.001	0.000	0.000	0.000



**TABLE 1A/11**  
**NOMINAL CAPACITY 11 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/11).

TEMPERATURE OF WATER			TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5	$t^{\circ}\text{C}$	0.0	0.5
5	0.014	0.014	23	0.039	0.040
6	0.014	0.014	24	0.041	0.043
7	0.015	0.015	25	0.044	0.045
8	0.015	0.015	26	0.047	0.048
9	0.016	0.016	27	0.050	0.051
10	0.016	0.017	28	0.053	0.054
11	0.017	0.018	29	0.056	0.057
12	0.018	0.019	30	0.059	0.060
13	0.020	0.020	31	0.062	0.064
14	0.021	0.022	32	0.065	0.067
15	0.023	0.023	33	0.069	0.071
16	0.024	0.025	34	0.072	0.074
17	0.026	0.027	35	0.076	0.078
18	0.028	0.029	36	0.080	0.082
19	0.030	0.031	37	0.084	0.086
20	0.032	0.033	38	0.087	0.089
21	0.034	0.035	39	0.091	0.093
22	0.036	0.038	40	0.095	0.098

**TABLE 2/11**  
**NOMINAL CAPACITY 11 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR, $^{\circ}\text{C}$	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	0.000	+0.001	+0.001	+0.001	+0.001	+0.001	+0.001
10	0.000	0.000	+0.001	+0.001	+0.001	+0.001	+0.001
15	0.000	0.000	0.000	+0.001	+0.001	+0.001	+0.001
20	0.000	0.000	0.000	0.000	0.000	+0.001	+0.001
25	0.000	0.000	0.000	0.000	0.000	0.000	+0.001
30	−0.001	0.000	0.000	0.000	0.000	0.000	0.000
35	−0.001	−0.001	0.000	0.000	0.000	0.000	0.000
40	−0.001	−0.001	−0.001	−0.001	0.000	0.000	0.000

**TABLE 1A/15**  
**NOMINAL CAPACITY 15 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/15).

TEMPERATURE OF WATER			TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5	$t^{\circ}\text{C}$	0.0	0.5
5	0.019	0.019	23	0.053	0.055
6	0.019	0.020	24	0.056	0.058
7	0.020	0.020	25	0.060	0.062
8	0.021	0.021	26	0.064	0.066
9	0.021	0.022	27	0.068	0.070
10	0.022	0.023	28	0.072	0.074
11	0.024	0.024	29	0.076	0.078
12	0.025	0.026	30	0.080	0.082
13	0.027	0.028	31	0.085	0.087
14	0.029	0.030	32	0.089	0.092
15	0.031	0.032	33	0.094	0.096
16	0.033	0.034	34	0.099	0.101
17	0.035	0.037	35	0.104	0.106
18	0.038	0.039	36	0.109	0.111
19	0.041	0.042	37	0.114	0.117
20	0.043	0.045	38	0.119	0.122
21	0.046	0.048	39	0.125	0.127
22	0.050	0.051	40	0.130	0.133

TABLE 2/15

NOMINAL CAPACITY 15 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (—) from it.

TEMPERATURE OF AIR, °C	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	+0.001	+0.001	+0.001	+0.001	+0.002	+0.002	+0.002
10	0.000	+0.001	+0.001	+0.001	+0.001	+0.001	+0.002
15	0.000	0.000	0.000	+0.001	+0.001	+0.001	+0.001
20	0.000	0.000	0.000	0.000	+0.001	+0.001	+0.001
25	—0.001	0.000	0.000	0.000	0.000	+0.001	+0.001
30	—0.001	—0.001	0.000	0.000	0.000	0.000	0.000
35	—0.001	—0.001	—0.001	0.000	0.000	0.000	0.000
40	—0.001	—0.001	—0.001	—0.001	—0.001	0.000	0.000

**TABLE 1A/20**  
**NOMINAL CAPACITY 20 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/20).

TEMP OF WATER $t^{\circ}\text{C}$	0-0	0-1	0-2	0-3	0-4	0-5	0-6	0-7	0-8	0-9	TEMP OF WATER $t^{\circ}\text{C}$
5	0-026	0-026	0-026	0-026	0-026	0-026	0-026	0-026	0-026	0-026	5
6	0-026	0-026	0-026	0-026	0-026	0-026	0-026	0-026	0-026	0-026	6
7	0-027	0-027	0-027	0-027	0-027	0-027	0-027	0-027	0-027	0-027	7
8	0-027	0-027	0-028	0-028	0-028	0-028	0-028	0-028	0-028	0-028	8
9	0-029	0-029	0-029	0-029	0-029	0-029	0-029	0-030	0-030	0-030	9
10	0-030	0-030	0-030	0-030	0-031	0-031	0-031	0-031	0-031	0-031	10
11	0-032	0-032	0-032	0-032	0-032	0-033	0-033	0-033	0-033	0-033	11
12	0-034	0-034	0-034	0-034	0-034	0-035	0-035	0-035	0-035	0-036	12
13	0-036	0-036	0-036	0-037	0-037	0-037	0-037	0-037	0-038	0-038	13
14	0-038	0-039	0-039	0-039	0-039	0-040	0-040	0-040	0-040	0-041	14
15	0-041	0-041	0-042	0-042	0-042	0-042	0-043	0-043	0-043	0-044	15
16	0-044	0-044	0-044	0-045	0-045	0-045	0-046	0-046	0-046	0-047	16
17	0-047	0-047	0-048	0-048	0-048	0-049	0-049	0-049	0-050	0-050	17
18	0-050	0-051	0-051	0-051	0-052	0-052	0-053	0-053	0-053	0-054	18
19	0-054	0-054	0-055	0-055	0-056	0-056	0-056	0-057	0-057	0-057	19
20	0-058	0-058	0-059	0-059	0-059	0-060	0-060	0-061	0-061	0-061	20
21	0-062	0-062	0-063	0-063	0-064	0-064	0-064	0-065	0-065	0-066	21
22	0-066	0-067	0-067	0-067	0-068	0-068	0-069	0-069	0-070	0-070	22
23	0-071	0-071	0-071	0-072	0-072	0-073	0-073	0-074	0-074	0-075	23
24	0-075	0-076	0-076	0-077	0-077	0-078	0-078	0-079	0-079	0-080	24
25	0-080	0-081	0-081	0-082	0-082	0-083	0-083	0-084	0-084	0-085	25
26	0-085	0-086	0-086	0-087	0-087	0-088	0-088	0-089	0-089	0-090	26
27	0-090	0-091	0-091	0-092	0-092	0-093	0-093	0-094	0-095	0-095	27
28	0-096	0-096	0-097	0-097	0-098	0-098	0-099	0-100	0-100	0-101	28
29	0-101	0-102	0-102	0-103	0-104	0-104	0-105	0-105	0-106	0-106	29
30	0-107	0-108	0-108	0-109	0-109	0-110	0-111	0-111	0-112	0-112	30
31	0-113	0-114	0-114	0-115	0-115	0-116	0-117	0-117	0-118	0-118	31
32	0-119	0-120	0-120	0-121	0-121	0-122	0-123	0-123	0-124	0-125	32
33	0-125	0-126	0-127	0-127	0-128	0-128	0-129	0-130	0-130	0-131	33
34	0-132	0-132	0-133	0-134	0-134	0-135	0-136	0-136	0-137	0-138	34
35	0-138	0-139	0-140	0-140	0-141	0-142	0-142	0-143	0-144	0-144	35
36	0-145	0-146	0-146	0-147	0-148	0-148	0-149	0-150	0-151	0-151	36
37	0-152	0-153	0-153	0-154	0-155	0-155	0-156	0-157	0-158	0-158	37
38	0-159	0-160	0-160	0-161	0-162	0-163	0-163	0-164	0-165	0-166	38
39	0-166	0-167	0-168	0-168	0-169	0-170	0-171	0-171	0-172	0-173	39
40	0-174	0-174	0-175	0-176	0-177	0-177	0-178	0-179	0-180	0-180	40

TABLE 2/20

NOMINAL CAPACITY 20 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR, °C	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	+0.001	+0.001	+0.001	+0.002	+0.002	+0.002	+0.003
10	0.000	+0.001	+0.001	+0.001	+0.002	+0.002	+0.002
15	0.000	0.000	+0.001	+0.001	+0.001	+0.001	+0.002
20	0.000	0.000	0.000	+0.001	+0.001	+0.001	+0.001
25	−0.001	0.000	0.000	0.000	0.000	+0.001	+0.001
30	−0.001	−0.001	−0.001	0.000	0.000	0.000	+0.001
35	−0.001	−0.001	−0.001	−0.001	0.000	0.000	0.000
40	−0.002	−0.002	−0.001	−0.001	−0.001	0.000	0.000

**TABLE 1A/25**  
**NOMINAL CAPACITY 25 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/25).

TEMP OF WATER $t^{\circ}\text{C}$	0-0	0-1	0-2	0-3	0-4	0-5	0-6	0-7	0-8	0-9	TEMP OF WATER $t^{\circ}\text{C}$
5	0-032	0-032	0-032	0-032	0-032	0-032	0-032	0-032	0-032	0-032	5
6	0-032	0-032	0-033	0-033	0-033	0-033	0-033	0-033	0-033	0-033	6
7	0-033	0-033	0-033	0-033	0-034	0-034	0-034	0-034	0-034	0-034	7
8	0-034	0-034	0-034	0-035	0-035	0-035	0-035	0-035	0-035	0-036	8
9	0-036	0-036	0-036	0-036	0-036	0-037	0-037	0-037	0-037	0-037	9
10	0-037	0-038	0-038	0-038	0-038	0-038	0-039	0-039	0-039	0-039	10
11	0-040	0-040	0-040	0-040	0-040	0-041	0-041	0-041	0-041	0-042	11
12	0-042	0-042	0-043	0-043	0-043	0-043	0-044	0-044	0-044	0-044	12
13	0-045	0-045	0-045	0-046	0-046	0-046	0-047	0-047	0-047	0-048	13
14	0-048	0-048	0-048	0-049	0-049	0-049	0-050	0-050	0-050	0-051	14
15	0-051	0-052	0-052	0-052	0-053	0-053	0-053	0-054	0-054	0-054	15
16	0-055	0-055	0-056	0-056	0-056	0-057	0-057	0-058	0-058	0-058	16
17	0-059	0-059	0-060	0-060	0-060	0-061	0-061	0-062	0-062	0-063	17
18	0-063	0-063	0-064	0-064	0-065	0-065	0-066	0-066	0-067	0-067	18
19	0-068	0-068	0-068	0-069	0-069	0-070	0-070	0-071	0-071	0-072	19
20	0-072	0-073	0-073	0-074	0-074	0-075	0-075	0-076	0-076	0-077	20
21	0-077	0-078	0-078	0-079	0-079	0-080	0-081	0-081	0-082	0-082	21
22	0-083	0-083	0-084	0-084	0-085	0-085	0-086	0-087	0-087	0-088	22
23	0-088	0-089	0-089	0-090	0-090	0-091	0-092	0-092	0-093	0-093	23
24	0-094	0-095	0-095	0-096	0-096	0-097	0-098	0-098	0-099	0-099	24
25	0-100	0-101	0-101	0-102	0-103	0-103	0-104	0-104	0-105	0-106	25
26	0-106	0-107	0-108	0-108	0-109	0-110	0-110	0-111	0-112	0-112	26
27	0-113	0-113	0-114	0-115	0-115	0-116	0-117	0-118	0-118	0-119	27
28	0-120	0-120	0-121	0-122	0-122	0-123	0-124	0-124	0-125	0-126	28
29	0-127	0-127	0-128	0-129	0-129	0-130	0-131	0-132	0-132	0-133	29
30	0-134	0-134	0-135	0-136	0-137	0-137	0-138	0-139	0-140	0-140	30
31	0-141	0-142	0-143	0-143	0-144	0-145	0-146	0-146	0-147	0-148	31
32	0-149	0-150	0-150	0-151	0-152	0-153	0-153	0-154	0-155	0-156	32
33	0-157	0-157	0-158	0-159	0-160	0-161	0-161	0-162	0-163	0-164	33
34	0-165	0-165	0-166	0-167	0-168	0-169	0-170	0-170	0-171	0-172	34
35	0-173	0-174	0-175	0-175	0-176	0-177	0-178	0-179	0-180	0-180	35
36	0-181	0-182	0-183	0-184	0-185	0-186	0-186	0-187	0-188	0-189	36
37	0-190	0-191	0-192	0-193	0-193	0-194	0-195	0-196	0-197	0-198	37
38	0-199	0-200	0-201	0-201	0-202	0-203	0-204	0-205	0-206	0-207	38
39	0-208	0-209	0-210	0-211	0-211	0-212	0-213	0-214	0-215	0-216	39
40	0-217	0-218	0-219	0-220	0-221	0-222	0-223	0-224	0-225	0-225	40

TABLE 2/25

NOMINAL CAPACITY 25 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR, °C.	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	+0.001	+0.001	+0.002	+0.002	+0.003	+0.003	+0.003
10	+0.001	+0.001	+0.001	+0.002	+0.002	+0.002	+0.003
15	0.000	0.000	+0.001	+0.001	+0.002	+0.002	+0.002
20	0.000	0.000	0.000	+0.001	+0.001	+0.001	+0.002
25	−0.001	−0.001	0.000	0.000	+0.001	+0.001	+0.001
30	−0.001	−0.001	−0.001	0.000	0.000	0.000	+0.001
35	−0.002	−0.001	−0.001	−0.001	0.000	0.000	0.000
40	−0.002	−0.002	−0.002	−0.001	−0.001	−0.001	0.000

**TABLE 1A/30**  
**NOMINAL CAPACITY 30 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/30).

TEMP OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMP OF WATER $t^{\circ}\text{C}$
5	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	5
6	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.040	0.040	6
7	0.040	0.040	0.040	0.040	0.040	0.040	0.041	0.041	0.041	0.041	7
8	0.041	0.041	0.041	0.042	0.042	0.042	0.042	0.042	0.042	0.043	8
9	0.043	0.043	0.043	0.043	0.044	0.044	0.044	0.044	0.044	0.045	9
10	0.045	0.045	0.045	0.046	0.046	0.046	0.046	0.047	0.047	0.047	10
11	0.047	0.048	0.048	0.048	0.049	0.049	0.049	0.049	0.050	0.050	11
12	0.050	0.051	0.051	0.051	0.052	0.052	0.052	0.053	0.053	0.053	12
13	0.054	0.054	0.054	0.055	0.055	0.056	0.056	0.056	0.057	0.057	13
14	0.057	0.058	0.058	0.059	0.059	0.059	0.060	0.060	0.061	0.061	14
15	0.061	0.062	0.062	0.063	0.063	0.064	0.064	0.064	0.065	0.065	15
16	0.066	0.066	0.067	0.067	0.068	0.068	0.069	0.069	0.070	0.070	16
17	0.071	0.071	0.072	0.072	0.073	0.073	0.074	0.074	0.075	0.075	17
18	0.076	0.076	0.077	0.077	0.078	0.078	0.079	0.079	0.080	0.080	18
19	0.081	0.082	0.082	0.083	0.083	0.084	0.084	0.085	0.086	0.086	19
20	0.087	0.087	0.088	0.089	0.089	0.090	0.090	0.091	0.092	0.092	20
21	0.093	0.093	0.094	0.095	0.095	0.096	0.097	0.097	0.098	0.099	21
22	0.099	0.100	0.100	0.101	0.102	0.102	0.103	0.104	0.104	0.105	22
23	0.106	0.107	0.107	0.108	0.109	0.109	0.110	0.111	0.111	0.112	23
24	0.113	0.114	0.114	0.115	0.116	0.116	0.117	0.118	0.119	0.119	24
25	0.120	0.121	0.122	0.122	0.123	0.124	0.125	0.125	0.126	0.127	25
26	0.128	0.128	0.129	0.130	0.131	0.131	0.132	0.133	0.134	0.135	26
27	0.135	0.136	0.137	0.138	0.139	0.139	0.140	0.141	0.142	0.143	27
28	0.143	0.144	0.145	0.146	0.147	0.148	0.148	0.149	0.150	0.151	28
29	0.152	0.153	0.154	0.154	0.155	0.156	0.157	0.158	0.159	0.160	29
30	0.160	0.161	0.162	0.163	0.164	0.165	0.166	0.167	0.168	0.168	30
31	0.169	0.170	0.171	0.172	0.173	0.174	0.175	0.176	0.177	0.178	31
32	0.178	0.179	0.180	0.181	0.182	0.183	0.184	0.185	0.186	0.187	32
33	0.188	0.189	0.190	0.191	0.192	0.193	0.194	0.195	0.196	0.197	33
34	0.198	0.199	0.199	0.200	0.201	0.202	0.203	0.204	0.205	0.206	34
35	0.207	0.208	0.209	0.210	0.211	0.212	0.213	0.214	0.216	0.217	35
36	0.218	0.219	0.220	0.221	0.222	0.223	0.224	0.225	0.226	0.227	36
37	0.228	0.229	0.230	0.231	0.232	0.233	0.234	0.235	0.236	0.237	37
38	0.239	0.240	0.241	0.242	0.243	0.244	0.245	0.246	0.247	0.248	38
39	0.249	0.250	0.252	0.253	0.254	0.255	0.256	0.257	0.258	0.259	39
40	0.260	0.262	0.263	0.264	0.265	0.266	0.267	0.268	0.269	0.271	40



**TABLE 2/30**  
**NOMINAL CAPACITY 30 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (—) from it.

TEMPERATURE OF AIR, °C	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	+0.001	+0.002	+0.002	+0.003	+0.003	+0.003	+0.004
10	+0.001	+0.001	+0.002	+0.002	+0.002	+0.003	+0.003
15	0.000	+0.001	+0.001	+0.001	+0.002	+0.002	+0.003
20	0.000	0.000	0.000	+0.001	+0.001	+0.002	+0.002
25	—0.001	—0.001	0.000	0.000	+0.001	+0.001	+0.001
30	—0.002	—0.001	—0.001	0.000	0.000	0.000	+0.001
35	—0.002	—0.002	—0.001	—0.001	—0.001	0.000	0.000
40	—0.003	—0.002	—0.002	—0.002	—0.001	—0.001	0.000

**TABLE 1A/40**  
**NOMINAL CAPACITY 40 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/40).

TEMP OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMP OF WATER $t^{\circ}\text{C}$
5	0.051	0.051	0.051	0.051	0.052	0.052	0.052	0.052	0.052	0.052	5
6	0.052	0.052	0.052	0.052	0.052	0.052	0.053	0.053	0.053	0.053	6
7	0.053	0.053	0.053	0.053	0.054	0.054	0.054	0.054	0.054	0.055	7
8	0.055	0.055	0.055	0.055	0.056	0.056	0.056	0.056	0.057	0.057	8
9	0.057	0.057	0.058	0.058	0.058	0.058	0.059	0.059	0.059	0.060	9
10	0.060	0.060	0.061	0.061	0.061	0.062	0.062	0.062	0.063	0.063	10
11	0.063	0.064	0.064	0.064	0.065	0.065	0.066	0.066	0.066	0.067	11
12	0.067	0.068	0.068	0.068	0.069	0.069	0.070	0.070	0.071	0.071	12
13	0.072	0.072	0.073	0.073	0.074	0.074	0.074	0.075	0.075	0.076	13
14	0.077	0.077	0.078	0.078	0.079	0.079	0.080	0.080	0.081	0.081	14
15	0.082	0.082	0.083	0.084	0.084	0.085	0.085	0.086	0.087	0.087	15
16	0.088	0.088	0.089	0.090	0.090	0.091	0.092	0.092	0.093	0.093	16
17	0.094	0.095	0.095	0.096	0.097	0.097	0.098	0.099	0.099	0.100	17
18	0.101	0.102	0.102	0.103	0.104	0.104	0.105	0.106	0.107	0.107	18
19	0.108	0.109	0.110	0.110	0.111	0.112	0.113	0.113	0.114	0.115	19
20	0.116	0.116	0.117	0.118	0.119	0.120	0.120	0.121	0.122	0.123	20
21	0.124	0.125	0.125	0.126	0.127	0.128	0.129	0.130	0.131	0.131	21
22	0.132	0.133	0.134	0.135	0.136	0.137	0.138	0.138	0.139	0.140	22
23	0.141	0.142	0.143	0.144	0.145	0.146	0.147	0.148	0.149	0.149	23
24	0.150	0.151	0.152	0.153	0.154	0.155	0.156	0.157	0.158	0.159	24
25	0.160	0.161	0.162	0.163	0.164	0.165	0.166	0.167	0.168	0.169	25
26	0.170	0.171	0.172	0.173	0.174	0.175	0.176	0.177	0.178	0.179	26
27	0.181	0.182	0.183	0.184	0.185	0.186	0.187	0.188	0.189	0.190	27
28	0.191	0.192	0.194	0.195	0.196	0.197	0.198	0.199	0.200	0.201	28
29	0.202	0.204	0.205	0.206	0.207	0.208	0.209	0.210	0.212	0.213	29
30	0.214	0.215	0.216	0.217	0.219	0.220	0.221	0.222	0.223	0.225	30
31	0.226	0.227	0.228	0.229	0.231	0.232	0.233	0.234	0.236	0.237	31
32	0.238	0.239	0.240	0.242	0.243	0.244	0.245	0.247	0.248	0.249	32
33	0.251	0.252	0.253	0.254	0.256	0.257	0.258	0.259	0.261	0.262	33
34	0.263	0.265	0.266	0.267	0.269	0.270	0.271	0.273	0.274	0.275	34
35	0.277	0.278	0.279	0.281	0.282	0.283	0.285	0.286	0.287	0.289	35
36	0.290	0.291	0.293	0.294	0.296	0.297	0.298	0.300	0.301	0.303	36
37	0.304	0.305	0.307	0.308	0.310	0.311	0.312	0.314	0.315	0.317	37
38	0.318	0.319	0.321	0.322	0.324	0.325	0.327	0.328	0.330	0.331	38
39	0.332	0.334	0.335	0.337	0.338	0.340	0.341	0.343	0.344	0.346	39
40	0.347	0.349	0.350	0.352	0.353	0.355	0.356	0.358	0.359	0.361	40

TABLE 2/40

NOMINAL CAPACITY 40 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR, °C	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	+0.002	+0.002	+0.003	+0.003	+0.004	+0.005	+0.005
10	+0.001	+0.001	+0.002	+0.003	+0.003	+0.004	+0.004
15	0.000	+0.001	+0.001	+0.002	+0.002	+0.003	+0.004
20	−0.001	0.000	0.001	+0.001	+0.002	+0.002	+0.003
25	−0.001	−0.001	0.000	0.000	+0.001	+0.001	+0.002
30	−0.002	−0.002	−0.001	0.000	0.000	+0.001	+0.001
35	−0.003	−0.002	−0.002	−0.001	−0.001	0.000	0.000
40	−0.004	−0.003	−0.003	−0.002	−0.001	−0.001	0.000

**TABLE 1A/50**  
**NOMINAL CAPACITY 50 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/50)

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.064	0.064	0.064	0.064	0.064	0.064	0.065	0.065	0.065	0.065	5
6	0.065	0.065	0.065	0.065	0.065	0.066	0.066	0.066	0.066	0.066	6
7	0.066	0.067	0.067	0.067	0.067	0.067	0.068	0.068	0.068	0.068	7
8	0.068	0.069	0.069	0.069	0.070	0.070	0.070	0.070	0.071	0.071	8
9	0.071	0.072	0.072	0.072	0.073	0.073	0.073	0.074	0.074	0.075	9
10	0.075	0.075	0.076	0.076	0.077	0.077	0.077	0.078	0.078	0.079	10
11	0.079	0.080	0.080	0.081	0.081	0.081	0.082	0.082	0.083	0.083	11
12	0.084	0.085	0.085	0.086	0.086	0.087	0.087	0.088	0.088	0.089	12
13	0.090	0.090	0.091	0.091	0.092	0.093	0.093	0.094	0.094	0.095	13
14	0.096	0.096	0.097	0.098	0.098	0.099	0.100	0.100	0.101	0.102	14
15	0.102	0.103	0.104	0.105	0.105	0.106	0.107	0.107	0.108	0.109	15
16	0.110	0.110	0.111	0.112	0.113	0.114	0.114	0.115	0.116	0.117	16
17	0.118	0.118	0.119	0.120	0.121	0.122	0.123	0.123	0.124	0.125	17
18	0.126	0.127	0.128	0.129	0.130	0.131	0.131	0.132	0.133	0.134	18
19	0.135	0.136	0.137	0.138	0.139	0.140	0.141	0.142	0.143	0.144	19
20	0.145	0.146	0.147	0.148	0.149	0.150	0.151	0.152	0.153	0.154	20
21	0.155	0.156	0.157	0.158	0.159	0.160	0.161	0.162	0.163	0.164	21
22	0.165	0.166	0.167	0.169	0.170	0.171	0.172	0.173	0.174	0.175	22
23	0.176	0.178	0.179	0.180	0.181	0.182	0.183	0.184	0.186	0.187	23
24	0.188	0.189	0.190	0.192	0.193	0.194	0.195	0.196	0.198	0.199	24
25	0.200	0.201	0.203	0.204	0.205	0.206	0.208	0.209	0.210	0.211	25
26	0.213	0.214	0.215	0.216	0.218	0.219	0.220	0.222	0.223	0.224	26
27	0.226	0.227	0.228	0.230	0.231	0.232	0.234	0.235	0.236	0.238	27
28	0.239	0.241	0.242	0.243	0.245	0.246	0.247	0.249	0.250	0.252	28
29	0.253	0.254	0.256	0.257	0.259	0.260	0.262	0.263	0.265	0.266	29
30	0.267	0.269	0.270	0.272	0.273	0.275	0.276	0.278	0.279	0.281	30
31	0.282	0.284	0.285	0.287	0.288	0.290	0.291	0.293	0.294	0.296	31
32	0.297	0.299	0.301	0.302	0.304	0.305	0.307	0.308	0.310	0.312	32
33	0.313	0.315	0.316	0.318	0.320	0.321	0.323	0.324	0.326	0.328	33
34	0.329	0.331	0.332	0.334	0.336	0.337	0.339	0.341	0.342	0.344	34
35	0.346	0.347	0.349	0.351	0.352	0.354	0.356	0.357	0.359	0.361	35
36	0.363	0.364	0.366	0.368	0.369	0.371	0.373	0.375	0.376	0.378	36
37	0.380	0.382	0.383	0.385	0.387	0.389	0.390	0.392	0.394	0.396	37
38	0.398	0.399	0.401	0.403	0.405	0.407	0.408	0.410	0.412	0.414	38
39	0.416	0.417	0.419	0.421	0.423	0.425	0.427	0.428	0.430	0.432	39
40	0.434	0.436	0.438	0.440	0.442	0.443	0.445	0.447	0.449	0.451	40

TABLE 2/50

NOMINAL CAPACITY 50 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (—) from it.

TEMPERATURE OF AIR, °C	PRESSURE OF AIR IN mmHg						
	730	740	750	760	770	780	790
5	+0.002	+0.003	+0.004	+0.004	+0.005	+0.006	+0.007
10	+0.001	+0.002	+0.003	+0.003	+0.004	+0.005	+0.005
15	0.000	+0.001	+0.002	+0.002	+0.003	+0.004	+0.004
20	—0.001	0.000	+0.001	+0.001	+0.002	+0.003	+0.003
25	—0.002	—0.001	0.000	0.000	+0.001	+0.002	+0.002
30	—0.003	—0.002	—0.001	—0.001	0.000	+0.001	+0.001
35	—0.004	—0.003	—0.002	—0.002	—0.001	0.000	0.000
40	—0.004	—0.004	—0.003	—0.003	—0.002	—0.001	—0.001

**TABLE 1A/60**  
**NOMINAL CAPACITY 60 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/60).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.078	0.078	0.078	5
6	0.078	0.078	0.078	0.078	0.078	0.079	0.079	0.079	0.079	0.079	6
7	0.080	0.080	0.080	0.080	0.081	0.081	0.081	0.081	0.082	0.082	7
8	0.082	0.082	0.083	0.083	0.083	0.084	0.084	0.084	0.085	0.085	8
9	0.086	0.086	0.086	0.087	0.087	0.088	0.088	0.089	0.089	0.089	9
10	0.090	0.090	0.091	0.091	0.092	0.092	0.093	0.093	0.094	0.094	10
11	0.095	0.095	0.096	0.097	0.097	0.098	0.098	0.099	0.100	0.100	11
12	0.101	0.101	0.102	0.103	0.103	0.104	0.105	0.105	0.106	0.107	12
13	0.107	0.108	0.109	0.110	0.110	0.111	0.112	0.112	0.113	0.114	13
14	0.115	0.116	0.116	0.117	0.118	0.119	0.120	0.120	0.121	0.122	14
15	0.123	0.124	0.125	0.125	0.126	0.127	0.128	0.129	0.130	0.131	15
16	0.132	0.133	0.133	0.134	0.135	0.136	0.137	0.138	0.139	0.140	16
17	0.141	0.142	0.143	0.144	0.145	0.146	0.147	0.148	0.149	0.150	17
18	0.151	0.152	0.153	0.154	0.156	0.157	0.158	0.159	0.160	0.161	18
19	0.162	0.163	0.164	0.165	0.167	0.168	0.169	0.170	0.171	0.172	19
20	0.174	0.175	0.176	0.177	0.178	0.180	0.181	0.182	0.183	0.184	20
21	0.186	0.187	0.188	0.189	0.191	0.192	0.193	0.194	0.196	0.197	21
22	0.198	0.200	0.201	0.202	0.204	0.205	0.206	0.208	0.209	0.210	22
23	0.212	0.213	0.214	0.216	0.217	0.219	0.220	0.221	0.223	0.224	23
24	0.226	0.227	0.228	0.230	0.231	0.233	0.234	0.236	0.237	0.239	24
25	0.240	0.242	0.243	0.245	0.246	0.248	0.249	0.251	0.252	0.254	25
26	0.255	0.257	0.258	0.260	0.261	0.263	0.264	0.266	0.268	0.269	26
27	0.271	0.272	0.274	0.276	0.277	0.279	0.280	0.282	0.284	0.285	27
28	0.287	0.289	0.290	0.292	0.294	0.295	0.297	0.299	0.300	0.302	28
29	0.304	0.305	0.307	0.309	0.311	0.312	0.314	0.316	0.317	0.319	29
30	0.321	0.323	0.324	0.326	0.328	0.330	0.332	0.333	0.335	0.337	30
31	0.339	0.341	0.342	0.344	0.346	0.348	0.350	0.351	0.353	0.355	31
32	0.357	0.359	0.361	0.363	0.364	0.366	0.368	0.370	0.372	0.374	32
33	0.376	0.378	0.380	0.382	0.383	0.385	0.387	0.389	0.391	0.393	33
34	0.395	0.397	0.399	0.401	0.403	0.405	0.407	0.409	0.411	0.413	34
35	0.415	0.417	0.419	0.421	0.423	0.425	0.427	0.429	0.431	0.433	35
36	0.435	0.437	0.439	0.441	0.443	0.445	0.447	0.450	0.452	0.454	36
37	0.456	0.458	0.460	0.462	0.464	0.466	0.469	0.471	0.473	0.475	37
38	0.477	0.479	0.481	0.484	0.486	0.488	0.490	0.492	0.494	0.497	38
39	0.499	0.501	0.503	0.505	0.508	0.510	0.512	0.514	0.516	0.519	39
40	0.521	0.523	0.525	0.528	0.530	0.532	0.534	0.537	0.539	0.541	40

TABLE 2/60

NOMINAL CAPACITY 60 cm<sup>3</sup>

Allowance for temperature and pressure of air.

Add (+) to mass or subtract (—) from it.

TEMPERATURE OF AIR t °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·003	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·007	+·008
6	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·005	+·006	+·006	+·007	+·007	+·008
7	+·002	+·003	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·006	+·007	+·007
8	+·002	+·002	+·003	+·003	+·004	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007
9	+·002	+·002	+·002	+·003	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007
10	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·004	+·005	+·005	+·006	+·006	+·007
11	+·001	+·002	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·005	+·006	+·006
12	+·001	+·001	+·002	+·002	+·003	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006
13	+·001	+·001	+·002	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·005	+·006
14	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·003	+·004	+·004	+·005	+·005	+·006
15	0·000	+·001	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·004	+·005	+·005
16	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·003	+·004	+·004	+·005	+·005
17	0·000	0·000	+·001	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·004	+·005
18	0·000	0·000	0·000	+·001	+·001	+·002	+·002	+·002	+·003	+·003	+·004	+·004	+·005
19	—·001	0·000	0·000	+·001	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·004
20	—·001	0·000	0·000	0·000	+·001	+·001	+·002	+·002	+·002	+·003	+·003	+·004	+·004
21	—·001	—·001	0·000	0·000	+·001	+·001	+·001	+·002	+·002	+·003	+·003	+·003	+·004
22	—·001	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·002	+·003	+·003	+·004
23	—·002	—·001	—·001	0·000	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·003
24	—·002	—·001	—·001	—·001	0·000	0·000	+·001	+·001	+·001	+·002	+·002	+·003	+·003
25	—·002	—·002	—·001	—·001	0·000	0·000	0·000	+·001	+·001	+·002	+·002	+·002	+·003
26	—·002	—·002	—·001	—·001	—·001	0·000	0·000	+·001	+·001	+·001	+·002	+·002	+·003
27	—·002	—·002	—·002	—·001	—·001	0·000	0·000	0·000	+·001	+·001	+·002	+·002	+·002
28	—·003	—·002	—·002	—·001	—·001	—·001	0·000	0·000	+·001	+·001	—·001	+·002	+·002
29	—·003	—·003	—·002	—·002	—·001	—·001	0·000	0·000	0·000	+·001	—·001	+·002	+·002
30	—·003	—·003	—·002	—·002	—·002	—·001	—·001	0·000	0·000	0·000	+·001	+·001	+·002
31	—·003	—·003	—·003	—·002	—·002	—·001	—·001	—·001	0·000	0·000	+·001	+·001	+·001
32	—·004	—·003	—·003	—·002	—·002	—·002	—·001	—·001	0·000	0·000	0·000	+·001	+·001
33	—·004	—·003	—·003	—·003	—·002	—·002	—·001	—·001	—·001	0·000	0·000	0·000	+·001
34	—·004	—·004	—·003	—·003	—·002	—·002	—·002	—·001	—·001	0·000	0·000	0·000	+·001
35	—·004	—·004	—·003	—·003	—·003	—·002	—·002	—·001	—·001	—·001	0·000	0·000	+·001
36	—·004	—·004	—·004	—·003	—·003	—·002	—·002	—·002	—·001	—·001	—·001	0·000	0·000
37	—·005	—·004	—·004	—·004	—·003	—·003	—·002	—·002	—·002	—·001	—·001	0·000	0·000
38	—·005	—·005	—·004	—·004	—·003	—·003	—·003	—·002	—·002	—·001	—·001	—·001	0·000
39	—·005	—·005	—·004	—·004	—·004	—·003	—·003	—·002	—·002	—·002	—·001	—·001	0·000
40	—·005	—·005	—·005	—·004	—·004	—·003	—·003	—·003	—·002	—·002	—·001	—·001	—·001

**TABLE 1A/70**  
**NOMINAL CAPACITY 70 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/70).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.091	0.091	5
6	0.091	0.091	0.091	0.091	0.092	0.092	0.092	0.092	0.092	0.093	6
7	0.093	0.093	0.093	0.094	0.094	0.094	0.095	0.095	0.095	0.096	7
8	0.096	0.096	0.097	0.097	0.097	0.098	0.098	0.099	0.099	0.099	8
9	0.100	0.100	0.101	0.101	0.102	0.102	0.103	0.103	0.104	0.104	9
10	0.105	0.105	0.106	0.107	0.107	0.108	0.108	0.109	0.110	0.110	10
11	0.111	0.111	0.112	0.113	0.113	0.114	0.115	0.115	0.116	0.117	11
12	0.118	0.118	0.119	0.120	0.121	0.121	0.122	0.123	0.124	0.125	12
13	0.125	0.126	0.127	0.128	0.129	0.130	0.130	0.131	0.132	0.133	13
14	0.134	0.135	0.136	0.137	0.138	0.139	0.139	0.140	0.141	0.142	14
15	0.143	0.144	0.145	0.146	0.147	0.148	0.149	0.150	0.151	0.153	15
16	0.154	0.155	0.156	0.157	0.158	0.159	0.160	0.161	0.162	0.164	16
17	0.165	0.166	0.167	0.168	0.169	0.170	0.172	0.173	0.174	0.175	17
18	0.176	0.178	0.179	0.180	0.181	0.183	0.184	0.185	0.187	0.188	18
19	0.189	0.190	0.192	0.193	0.194	0.196	0.197	0.198	0.200	0.201	19
20	0.202	0.204	0.205	0.207	0.208	0.209	0.211	0.212	0.214	0.215	20
21	0.217	0.218	0.220	0.221	0.222	0.224	0.225	0.227	0.228	0.230	21
22	0.231	0.233	0.234	0.236	0.238	0.239	0.241	0.242	0.244	0.245	22
23	0.247	0.249	0.250	0.252	0.253	0.255	0.257	0.258	0.260	0.262	23
24	0.263	0.265	0.267	0.268	0.270	0.272	0.273	0.275	0.277	0.278	24
25	0.280	0.282	0.284	0.285	0.287	0.289	0.291	0.292	0.294	0.296	25
26	0.298	0.299	0.301	0.303	0.305	0.307	0.309	0.310	0.312	0.314	26
27	0.316	0.318	0.320	0.321	0.323	0.325	0.327	0.329	0.331	0.333	27
28	0.335	0.337	0.339	0.341	0.343	0.344	0.346	0.348	0.350	0.352	28
29	0.354	0.356	0.358	0.360	0.362	0.364	0.366	0.368	0.370	0.372	29
30	0.374	0.376	0.379	0.381	0.383	0.385	0.387	0.389	0.391	0.393	30
31	0.395	0.397	0.399	0.401	0.404	0.406	0.408	0.410	0.412	0.414	31
32	0.416	0.419	0.421	0.423	0.425	0.427	0.430	0.432	0.434	0.436	32
33	0.438	0.441	0.443	0.445	0.447	0.450	0.452	0.454	0.456	0.559	33
34	0.461	0.463	0.465	0.468	0.470	0.472	0.475	0.477	0.479	0.482	34
35	0.484	0.486	0.489	0.491	0.493	0.496	0.498	0.500	0.503	0.505	35
36	0.508	0.510	0.512	0.515	0.517	0.520	0.522	0.525	0.527	0.529	36
37	0.532	0.534	0.537	0.539	0.542	0.544	0.547	0.549	0.552	0.554	37
38	0.557	0.559	0.562	0.564	0.567	0.569	0.572	0.574	0.577	0.579	38
39	0.582	0.584	0.587	0.590	0.592	0.595	0.597	0.600	0.602	0.605	39
40	0.608	0.610	0.613	0.616	0.618	0.621	0.623	0.626	0.629	0.631	40



**TABLE 2/70**  
**NOMINAL CAPACITY 70 cm<sup>3</sup>**

Allowance for temperature and pressure of air.

Add (+) to mass or subtract (—) from it.

TEMPERATURE OF AIR t°C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·003	+·003	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·008	+·008	+·009	+·009
6	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·008	+·008	+·009
7	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·007	+·007	+·008	+·008	+·009
8	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·008	+·008
9	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·008
10	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·008
11	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007
12	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007
13	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007
14	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007
15	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006
16	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006
17	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006
18	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005
19	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005
20	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005
21	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005
22	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004
23	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·002	+·003	+·003	+·004
24	—·002	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004
25	—·002	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·001	+·002	+·002	+·003	+·003
26	—·003	—·002	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003
27	—·003	—·002	—·002	—·001	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003
28	—·003	—·003	—·002	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003
29	—·003	—·003	—·002	—·002	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002
30	—·004	—·003	—·003	—·002	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·002	+·002
31	—·004	—·003	—·003	—·003	—·002	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·002
32	—·004	—·004	—·003	—·003	—·002	—·002	—·001	—·001	0·000	0·000	+·001	+·001	+·001
33	—·004	—·004	—·004	—·003	—·003	—·002	—·002	—·001	—·001	0·000	0·000	+·001	+·001
34	—·005	—·004	—·004	—·003	—·003	—·002	—·002	—·001	—·001	—·001	0·000	0·000	+·001
35	—·005	—·004	—·004	—·004	—·003	—·003	—·002	—·002	—·001	—·001	0·000	0·000	+·001
36	—·005	—·005	—·004	—·004	—·003	—·003	—·002	—·002	—·002	—·001	—·001	0·000	0·000
37	—·005	—·005	—·005	—·004	—·004	—·003	—·003	—·002	—·002	—·002	—·001	0·000	0·000
38	—·006	—·005	—·005	—·004	—·004	—·003	—·003	—·003	—·002	—·002	—·001	—·001	0·000
39	—·006	—·006	—·005	—·005	—·004	—·004	—·003	—·003	—·002	—·002	—·001	—·001	0·000
40	—·006	—·006	—·005	—·005	—·004	—·004	—·004	—·003	—·003	—·002	—·002	—·001	—·001

**TABLE 1A/75**  
**NOMINAL CAPACITY 75 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/75).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.096	0.096	0.096	0.096	0.097	0.097	0.097	0.097	0.097	0.097	5
6	0.097	0.097	0.098	0.098	0.098	0.098	0.098	0.099	0.099	0.099	6
7	0.099	0.100	0.100	0.100	0.101	0.101	0.101	0.102	0.102	0.102	7
8	0.103	0.103	0.103	0.104	0.104	0.105	0.105	0.106	0.106	0.107	8
9	0.107	0.107	0.108	0.109	0.109	0.110	0.110	0.111	0.111	0.112	9
10	0.112	0.113	0.114	0.114	0.115	0.115	0.116	0.117	0.117	0.118	10
11	0.119	0.119	0.120	0.121	0.121	0.122	0.123	0.124	0.124	0.125	11
12	0.126	0.127	0.128	0.128	0.129	0.130	0.131	0.132	0.133	0.133	12
13	0.134	0.135	0.136	0.137	0.138	0.139	0.140	0.141	0.142	0.143	13
14	0.143	0.144	0.145	0.146	0.147	0.148	0.149	0.150	0.151	0.153	14
15	0.154	0.155	0.156	0.157	0.158	0.159	0.160	0.161	0.162	0.163	15
16	0.165	0.166	0.167	0.168	0.169	0.170	0.172	0.173	0.174	0.175	16
17	0.176	0.178	0.179	0.180	0.181	0.183	0.184	0.185	0.186	0.188	17
18	0.189	0.190	0.192	0.193	0.194	0.196	0.197	0.198	0.200	0.201	18
19	0.203	0.204	0.205	0.207	0.208	0.210	0.211	0.213	0.214	0.215	19
20	0.217	0.218	0.220	0.221	0.223	0.224	0.226	0.227	0.229	0.231	20
21	0.232	0.234	0.235	0.237	0.238	0.240	0.242	0.243	0.245	0.246	21
22	0.248	0.250	0.251	0.253	0.255	0.256	0.258	0.260	0.261	0.263	22
23	0.265	0.266	0.268	0.270	0.271	0.273	0.275	0.277	0.278	0.280	23
24	0.282	0.284	0.286	0.287	0.289	0.291	0.293	0.295	0.296	0.298	24
25	0.300	0.302	0.304	0.306	0.308	0.309	0.311	0.313	0.315	0.317	25
26	0.319	0.321	0.323	0.325	0.327	0.329	0.331	0.333	0.335	0.336	26
27	0.338	0.340	0.342	0.344	0.346	0.348	0.351	0.353	0.355	0.357	27
28	0.359	0.361	0.363	0.365	0.367	0.369	0.371	0.373	0.375	0.377	28
29	0.380	0.382	0.384	0.386	0.388	0.390	0.392	0.395	0.397	0.399	29
30	0.401	0.403	0.406	0.408	0.410	0.412	0.414	0.417	0.419	0.421	30
31	0.423	0.426	0.428	0.430	0.432	0.435	0.437	0.439	0.442	0.444	31
32	0.446	0.449	0.451	0.453	0.456	0.458	0.460	0.463	0.465	0.467	32
33	0.470	0.472	0.474	0.477	0.479	0.482	0.484	0.487	0.489	0.491	33
34	0.494	0.496	0.499	0.501	0.504	0.506	0.509	0.511	0.514	0.516	34
35	0.519	0.521	0.524	0.526	0.529	0.531	0.534	0.536	0.539	0.541	35
36	0.544	0.546	0.549	0.552	0.554	0.557	0.559	0.562	0.565	0.567	36
37	0.570	0.572	0.575	0.578	0.580	0.583	0.586	0.588	0.591	0.594	37
38	0.596	0.599	0.602	0.604	0.607	0.610	0.613	0.615	0.618	0.621	38
39	0.623	0.626	0.629	0.632	0.634	0.637	0.640	0.643	0.645	0.648	39
40	0.651	0.654	0.657	0.659	0.662	0.665	0.668	0.671	0.674	0.676	40

TABLE 2/75

NOMINAL CAPACITY 75 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·003	+·004	+·004	+·005	+·005	+·006	+·007	+·007	+·008	+·008	+·009	+·009	+·010
6	+·003	+·003	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·008	+·008	+·009	+·009
7	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·008	+·008	+·009	+·009
8	+·002	+·003	+·003	+·004	+·004	+·005	+·006	+·007	+·007	+·008	+·008	+·009	+·009
9	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·008	+·009
10	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·007	+·008	+·008
11	+·001	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·008
12	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·007	+·007	+·008
13	+·001	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·007
14	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007
15	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·006	+·007
16	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006
17	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·006	+·006
18	−·001	0·000	0·000	+·001	+·002	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·006
19	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005
20	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·004	+·005	+·005
21	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005
22	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·005
23	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004
24	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004
25	−·003	−·002	−·002	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004
26	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003
27	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·002	+·002	+·003	+·003
28	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003
29	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002
30	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002
31	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002
32	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002
33	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001
34	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001
35	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001
36	−·006	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000
37	−·006	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000
38	−·006	−·006	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000
39	−·006	−·006	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·002	−·001	−·001
40	−·007	−·006	−·006	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001

**TABLE 1A/80**  
**NOMINAL CAPACITY 80 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/80).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0-0	0-1	0-2	0-3	0-4	0-5	0-6	0-7	0-8	0-9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0-103	0-103	0-103	0-103	0-103	0-103	0-103	0-103	0-104	0-104	5
6	0-104	0-104	0-104	0-104	0-105	0-105	0-105	0-105	0-106	0-106	6
7	0-106	0-106	0-107	0-107	0-107	0-108	0-108	0-108	0-109	0-109	7
8	0-110	0-110	0-110	0-111	0-111	0-112	0-112	0-113	0-113	0-114	8
9	0-114	0-115	0-115	0-116	0-116	0-117	0-117	0-118	0-119	0-119	9
10	0-120	0-120	0-121	0-122	0-122	0-123	0-124	0-124	0-125	0-126	10
11	0-127	0-127	0-128	0-129	0-130	0-130	0-131	0-132	0-133	0-134	11
12	0-134	0-135	0-136	0-137	0-138	0-139	0-140	0-140	0-141	0-142	12
13	0-143	0-144	0-145	0-146	0-147	0-148	0-149	0-150	0-151	0-152	13
14	0-153	0-154	0-155	0-156	0-157	0-158	0-159	0-160	0-162	0-163	14
15	0-164	0-165	0-166	0-167	0-168	0-170	0-171	0-172	0-173	0-174	15
16	0-176	0-177	0-178	0-179	0-180	0-182	0-183	0-184	0-186	0-187	16
17	0-188	0-189	0-191	0-192	0-193	0-195	0-196	0-198	0-199	0-200	17
18	0-202	0-203	0-205	0-206	0-207	0-209	0-210	0-212	0-213	0-215	18
19	0-216	0-218	0-219	0-221	0-222	0-224	0-225	0-227	0-228	0-230	19
20	0-231	0-233	0-235	0-236	0-238	0-239	0-241	0-243	0-244	0-246	20
21	0-248	0-249	0-251	0-253	0-254	0-256	0-258	0-259	0-261	0-263	21
22	0-264	0-266	0-268	0-270	0-271	0-273	0-275	0-277	0-279	0-280	22
23	0-282	0-284	0-286	0-288	0-290	0-291	0-293	0-295	0-297	0-299	23
24	0-301	0-303	0-305	0-307	0-308	0-310	0-312	0-314	0-316	0-318	24
25	0-320	0-322	0-324	0-326	0-328	0-330	0-332	0-334	0-336	0-338	25
26	0-340	0-342	0-344	0-346	0-348	0-351	0-353	0-355	0-357	0-359	26
27	0-361	0-363	0-365	0-367	0-370	0-372	0-374	0-376	0-378	0-380	27
28	0-383	0-385	0-387	0-389	0-391	0-394	0-396	0-398	0-400	0-403	28
29	0-405	0-407	0-409	0-412	0-414	0-416	0-419	0-421	0-423	0-426	29
30	0-428	0-430	0-433	0-435	0-437	0-440	0-442	0-444	0-447	0-449	30
31	0-452	0-454	0-456	0-459	0-461	0-464	0-466	0-469	0-471	0-474	31
32	0-476	0-478	0-481	0-483	0-486	0-488	0-491	0-493	0-496	0-498	32
33	0-501	0-504	0-506	0-509	0-511	0-514	0-516	0-519	0-522	0-524	33
34	0-527	0-529	0-532	0-535	0-537	0-540	0-542	0-545	0-548	0-550	34
35	0-553	0-556	0-558	0-561	0-564	0-567	0-569	0-572	0-575	0-577	35
36	0-580	0-583	0-586	0-588	0-591	0-594	0-597	0-599	0-602	0-605	36
37	0-608	0-611	0-613	0-616	0-619	0-622	0-625	0-628	0-630	0-633	37
38	0-636	0-639	0-642	0-645	0-648	0-650	0-653	0-656	0-659	0-662	38
39	0-665	0-668	0-671	0-674	0-677	0-680	0-683	0-686	0-689	0-691	39
40	0-694	0-697	0-700	0-703	0-706	0-709	0-712	0-715	0-719	0-722	40

**TABLE 2/80**  
**NOMINAL CAPACITY 80 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·003	+·004	+·005	+·005	+·006	+·006	+·007	+·008	+·008	+·009	+·009	+·010	+·010
6	+·003	+·004	+·004	+·005	+·005	+·006	+·007	+·007	+·008	+·008	+·009	+·010	+·010
7	+·003	+·003	+·004	+·005	+·005	+·006	+·006	+·007	+·007	+·008	+·009	+·009	+·010
8	+·002	+·003	+·004	+·004	+·005	+·006	+·007	+·007	+·008	+·008	+·009	+·009	+·009
9	+·002	+·003	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·007	+·008	+·009	+·009
10	+·002	+·002	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·008	+·008	+·009
11	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·007	+·008	+·008
12	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·005	+·006	+·006	+·007	+·008	+·008
13	+·001	+·001	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·007	+·007	+·008
14	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·006	+·007	+·007
15	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·007	+·007
16	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·006	+·007
17	0·000	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·004	+·005	+·005	+·006	+·006
18	−·001	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·006	+·006
19	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·005	+·006
20	−·001	−·001	0·000	0·000	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005	+·005
21	−·002	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·005	+·005
22	−·002	−·001	−·001	0·000	0·000	+·001	+·002	+·002	+·003	+·003	+·004	+·004	+·005
23	−·002	−·002	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004	+·005
24	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·004
25	−·003	−·002	−·002	−·001	−·001	0·000	+·001	+·001	+·002	+·002	+·003	+·003	+·004
26	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003	+·004
27	−·003	−·003	−·002	−·002	−·001	−·001	0·000	+·001	+·001	+·002	+·002	+·003	+·003
28	−·004	−·003	−·003	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002	+·003
29	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·002	+·002	+·003
30	−·004	−·004	−·003	−·003	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002	+·002
31	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001	+·002
32	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	0·000	0·000	+·001	+·001	+·002
33	−·005	−·005	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001	+·001
34	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001
35	−·006	−·005	−·005	−·004	−·004	−·003	−·002	−·002	−·001	−·001	0·000	0·000	+·001
36	−·006	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000	0·000
37	−·006	−·006	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	0·000	0·000
38	−·007	−·006	−·006	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001	0·000
39	−·007	−·006	−·006	−·005	−·005	−·004	−·004	−·003	−·003	−·002	−·002	−·001	−·001
40	−·007	−·007	−·006	−·006	−·005	−·005	−·004	−·003	−·003	−·002	−·002	−·001	−·001

**TABLE 1A/90**  
**NOMINAL CAPACITY 90 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/90).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.117	5
6	0.117	0.117	0.117	0.117	0.118	0.118	0.118	0.118	0.119	0.119	6
7	0.119	0.120	0.120	0.120	0.121	0.121	0.122	0.122	0.122	0.123	7
8	0.123	0.124	0.124	0.125	0.125	0.126	0.126	0.127	0.127	0.128	8
9	0.128	0.129	0.130	0.130	0.131	0.131	0.132	0.133	0.133	0.134	9
10	0.135	0.136	0.136	0.137	0.138	0.138	0.139	0.140	0.141	0.142	10
11	0.142	0.143	0.144	0.145	0.146	0.147	0.148	0.148	0.149	0.150	11
12	0.151	0.152	0.153	0.154	0.155	0.156	0.157	0.158	0.159	0.160	12
13	0.161	0.162	0.163	0.164	0.165	0.167	0.168	0.169	0.170	0.171	13
14	0.172	0.173	0.175	0.176	0.177	0.178	0.179	0.181	0.182	0.183	14
15	0.184	0.186	0.187	0.188	0.189	0.191	0.192	0.193	0.195	0.196	15
16	0.197	0.199	0.200	0.202	0.203	0.204	0.206	0.207	0.209	0.210	16
17	0.212	0.213	0.215	0.216	0.218	0.219	0.221	0.222	0.224	0.225	17
18	0.227	0.228	0.230	0.232	0.233	0.235	0.237	0.238	0.240	0.241	18
19	0.243	0.245	0.247	0.248	0.250	0.252	0.253	0.255	0.257	0.259	19
20	0.260	0.262	0.264	0.266	0.267	0.269	0.271	0.273	0.275	0.277	20
21	0.278	0.280	0.282	0.284	0.286	0.288	0.290	0.292	0.294	0.296	21
22	0.298	0.300	0.301	0.303	0.305	0.307	0.309	0.311	0.313	0.315	22
23	0.318	0.320	0.322	0.324	0.326	0.328	0.330	0.332	0.334	0.336	23
24	0.338	0.341	0.343	0.345	0.347	0.349	0.351	0.354	0.356	0.358	24
25	0.360	0.362	0.365	0.367	0.369	0.371	0.374	0.376	0.378	0.380	25
26	0.383	0.385	0.387	0.390	0.392	0.394	0.397	0.399	0.401	0.404	26
27	0.406	0.409	0.411	0.413	0.416	0.418	0.421	0.423	0.426	0.428	27
28	0.430	0.433	0.435	0.438	0.440	0.443	0.445	0.448	0.450	0.453	28
29	0.456	0.458	0.461	0.463	0.466	0.468	0.471	0.474	0.476	0.479	29
30	0.481	0.484	0.487	0.489	0.492	0.495	0.497	0.500	0.503	0.505	30
31	0.508	0.511	0.513	0.516	0.519	0.522	0.524	0.527	0.530	0.533	31
32	0.535	0.538	0.541	0.544	0.547	0.549	0.552	0.555	0.558	0.561	32
33	0.564	0.567	0.569	0.572	0.575	0.578	0.581	0.584	0.587	0.590	33
34	0.593	0.596	0.598	0.601	0.604	0.607	0.610	0.613	0.616	0.619	34
35	0.622	0.625	0.628	0.631	0.634	0.637	0.640	0.643	0.647	0.650	35
36	0.653	0.656	0.659	0.662	0.665	0.668	0.671	0.674	0.677	0.681	36
37	0.684	0.687	0.690	0.693	0.696	0.700	0.703	0.706	0.709	0.712	37
38	0.716	0.719	0.722	0.725	0.729	0.732	0.735	0.738	0.742	0.745	38
39	0.748	0.751	0.755	0.758	0.761	0.765	0.768	0.771	0.775	0.778	39
40	0.781	0.785	0.788	0.791	0.795	0.798	0.802	0.805	0.808	0.812	40

**TABLE 2/90**  
**NOMINAL CAPACITY 90 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (-) from it.

TEMP OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·004	+·004	+·005	+·006	+·006	+·007	+·008	+·008	+·009	+·010	+·010	+·011	+·012
6	+·003	+·004	+·005	+·005	+·006	+·007	+·007	+·008	+·009	+·009	+·010	+·011	+·011
7	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·008	+·008	+·009	+·010	+·010	+·011
8	+·003	+·003	+·004	+·005	+·005	+·006	+·007	+·007	+·008	+·009	+·009	+·010	+·011
9	+·002	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·008	+·008	+·009	+·010	+·010
10	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·007	+·007	+·008	+·009	+·009	+·010
11	+·002	+·002	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·008	+·008	+·009	+·009
12	+·001	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·007	+·007	+·008	+·008	+·009
13	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·007	+·008	+·009
14	+·001	+·001	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·006	+·007	+·008	+·008
15	0·000	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·005	+·006	+·007	+·007	+·008
16	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·008
17	0·000	0·000	+·001	+·002	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·007	+·007
18	—·001	0·000	+·001	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·006	+·006	+·007
19	—·001	0·000	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·007
20	—·001	—·001	0·000	+·001	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·006	+·006
21	—·002	—·001	0·000	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·005	+·005	+·006
22	—·002	—·001	—·001	0·000	0·000	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·005
23	—·002	—·002	—·001	—·001	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·004	+·005
24	—·003	—·002	—·001	—·001	0·000	0·000	+·001	+·002	+·002	+·003	+·003	+·004	+·005
25	—·003	—·002	—·002	—·001	—·001	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·004
26	—·003	—·003	—·002	—·002	—·001	0·000	0·000	+·001	+·002	+·002	+·003	+·003	+·004
27	—·004	—·003	—·002	—·002	—·001	—·001	0·000	+·001	+·001	+·002	+·002	+·003	+·004
28	—·004	—·003	—·003	—·002	—·002	—·001	0·000	0·000	+·001	+·001	+·002	+·003	+·003
29	—·004	—·004	—·003	—·003	—·002	—·001	—·001	0·000	0·000	+·001	+·002	+·002	+·003
30	—·005	—·004	—·003	—·003	—·002	—·002	—·001	0·000	0·000	+·001	+·001	+·002	+·003
31	—·005	—·004	—·004	—·003	—·003	—·002	—·001	—·001	0·000	0·000	+·001	+·002	+·002
32	—·005	—·005	—·004	—·004	—·003	—·002	—·002	—·001	—·001	0·000	+·001	+·001	+·002
33	—·006	—·005	—·005	—·004	—·003	—·003	—·002	—·002	—·001	0·000	0·000	+·001	+·002
34	—·006	—·005	—·005	—·004	—·004	—·003	—·002	—·002	—·001	—·001	0·000	+·001	+·001
35	—·006	—·006	—·005	—·005	—·004	—·003	—·003	—·002	—·002	—·001	0·000	0·000	+·001
36	—·007	—·006	—·006	—·005	—·004	—·004	—·003	—·003	—·002	—·001	—·001	0·000	0·000
37	—·007	—·006	—·006	—·005	—·005	—·004	—·003	—·003	—·002	—·002	—·001	—·001	0·000
38	—·007	—·007	—·006	—·006	—·005	—·004	—·004	—·003	—·003	—·002	—·001	—·001	0·000
39	—·008	—·007	—·007	—·006	—·005	—·005	—·004	—·004	—·003	—·002	—·002	—·001	—·001
40	—·008	—·007	—·007	—·006	—·006	—·005	—·005	—·004	—·003	—·003	—·002	—·002	—·001

**TABLE 1A/100**  
**NOMINAL CAPACITY 100 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/100).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.128	0.128	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.130	5
6	0.130	0.130	0.130	0.130	0.131	0.131	0.131	0.132	0.132	0.132	6
7	0.133	0.133	0.133	0.134	0.134	0.135	0.135	0.136	0.136	0.136	7
8	0.137	0.137	0.138	0.139	0.139	0.140	0.140	0.141	0.141	0.142	8
9	0.143	0.143	0.144	0.145	0.145	0.146	0.147	0.148	0.148	0.149	9
10	0.150	0.151	0.151	0.152	0.153	0.154	0.155	0.156	0.156	0.157	10
11	0.158	0.159	0.160	0.161	0.162	0.163	0.164	0.165	0.166	0.167	11
12	0.168	0.169	0.170	0.171	0.172	0.173	0.174	0.176	0.177	0.178	12
13	0.179	0.180	0.181	0.183	0.184	0.185	0.186	0.187	0.189	0.190	13
14	0.191	0.193	0.194	0.195	0.197	0.198	0.199	0.201	0.202	0.203	14
15	0.205	0.206	0.208	0.209	0.210	0.212	0.213	0.215	0.216	0.218	15
16	0.219	0.221	0.222	0.224	0.226	0.227	0.229	0.230	0.232	0.234	16
17	0.235	0.237	0.239	0.240	0.242	0.244	0.245	0.247	0.249	0.250	17
18	0.252	0.254	0.256	0.257	0.259	0.261	0.263	0.265	0.266	0.268	18
19	0.270	0.272	0.274	0.276	0.278	0.280	0.281	0.283	0.285	0.287	19
20	0.289	0.291	0.293	0.295	0.297	0.299	0.301	0.303	0.305	0.307	20
21	0.309	0.311	0.314	0.316	0.318	0.320	0.322	0.324	0.326	0.328	21
22	0.331	0.333	0.335	0.337	0.339	0.342	0.344	0.346	0.348	0.351	22
23	0.353	0.355	0.357	0.360	0.362	0.364	0.367	0.369	0.371	0.374	23
24	0.376	0.378	0.381	0.383	0.386	0.388	0.390	0.393	0.395	0.398	24
25	0.400	0.403	0.405	0.408	0.410	0.413	0.415	0.418	0.420	0.423	25
26	0.425	0.428	0.430	0.433	0.436	0.438	0.441	0.443	0.446	0.449	26
27	0.451	0.454	0.457	0.459	0.462	0.465	0.467	0.470	0.473	0.476	27
28	0.478	0.481	0.484	0.487	0.489	0.492	0.495	0.498	0.500	0.503	28
29	0.506	0.509	0.512	0.515	0.518	0.520	0.523	0.526	0.529	0.532	29
30	0.535	0.538	0.541	0.544	0.547	0.550	0.553	0.556	0.558	0.561	30
31	0.564	0.568	0.571	0.574	0.577	0.580	0.583	0.586	0.589	0.592	31
32	0.595	0.598	0.601	0.604	0.607	0.611	0.614	0.617	0.620	0.623	32
33	0.626	0.629	0.633	0.636	0.639	0.642	0.645	0.649	0.652	0.655	33
34	0.658	0.662	0.665	0.668	0.672	0.675	0.678	0.681	0.685	0.688	34
35	0.691	0.695	0.698	0.701	0.705	0.708	0.712	0.715	0.718	0.722	35
36	0.725	0.729	0.732	0.735	0.739	0.742	0.746	0.749	0.753	0.756	36
37	0.760	0.763	0.767	0.770	0.774	0.777	0.781	0.784	0.788	0.792	37
38	0.795	0.799	0.802	0.806	0.809	0.813	0.817	0.820	0.824	0.828	38
39	0.831	0.835	0.839	0.842	0.846	0.850	0.853	0.857	0.861	0.864	39
40	0.868	0.872	0.876	0.879	0.883	0.887	0.891	0.894	0.898	0.902	40



**TABLE 2/100**  
**NOMINAL CAPACITY 100 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (−) from it.

TEMP OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·004	+·005	+·006	+·006	+·007	+·008	+·009	+·009	+·010	+·011	+·012	+·012	+·013
6	+·004	+·005	+·005	+·006	+·007	+·008	+·008	+·009	+·010	+·010	+·011	+·012	+·013
7	+·003	+·004	+·005	+·006	+·006	+·007	+·008	+·009	+·009	+·010	+·011	+·011	+·012
8	+·003	+·004	+·005	+·005	+·006	+·007	+·007	+·008	+·009	+·010	+·010	+·011	+·012
9	+·003	+·003	+·004	+·005	+·006	+·006	+·007	+·008	+·008	+·009	+·010	+·011	+·011
10	+·002	+·003	+·004	+·004	+·005	+·006	+·007	+·007	+·008	+·009	+·010	+·010	+·011
11	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·007	+·008	+·008	+·009	+·010	+·011
12	+·002	+·002	+·003	+·004	+·004	+·005	+·006	+·007	+·007	+·008	+·009	+·009	+·010
13	+·001	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·007	+·008	+·008	+·009	+·010
14	+·001	+·001	+·002	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·008	+·009	+·009
15	0·000	+·001	+·002	+·002	+·003	+·004	+·005	+·005	+·006	+·007	+·007	+·008	+·009
16	0·000	+·001	+·001	+·002	+·003	+·004	+·004	+·005	+·006	+·006	+·007	+·008	+·008
17	0·000	0·000	+·001	+·002	+·002	+·003	+·004	+·005	+·005	+·006	+·007	+·007	+·008
18	−·001	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·005	+·006	+·006	+·007	+·008
19	−·001	0·000	0·000	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·006	+·007	+·007
20	−·002	−·001	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·005	+·005	+·006	+·007
21	−·002	−·001	−·001	0·000	+·001	+·002	+·002	+·003	+·004	+·004	+·005	+·006	+·006
22	−·002	−·002	−·001	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·005	+·005	+·006
23	−·003	−·002	−·001	−·001	0·000	+·001	+·001	+·002	+·003	+·004	+·004	+·005	+·006
24	−·003	−·002	−·002	−·001	0·000	0·000	+·001	+·002	+·002	+·003	+·004	+·005	+·005
25	−·003	−·003	−·002	−·001	−·001	0·000	+·001	+·001	+·002	+·003	+·003	+·004	+·005
26	−·004	−·003	−·002	−·002	−·001	0·000	0·000	+·001	+·002	+·002	+·003	+·004	+·004
27	−·004	−·003	−·003	−·002	−·001	−·001	0·000	+·001	+·001	+·002	+·003	+·003	+·004
28	−·004	−·004	−·003	−·002	−·002	−·001	0·000	0·000	+·001	+·002	+·002	+·003	+·004
29	−·005	−·004	−·004	−·003	−·002	−·001	−·001	0·000	+·001	+·001	+·002	+·003	+·003
30	−·005	−·005	−·004	−·003	−·003	−·002	−·001	−·001	0·000	+·001	+·002	+·002	+·003
31	−·006	−·005	−·004	−·004	−·003	−·002	−·002	−·001	0·000	0·000	+·001	+·002	+·002
32	−·006	−·005	−·005	−·004	−·003	−·003	−·002	−·001	−·001	0·000	+·001	+·001	+·002
33	−·006	−·006	−·005	−·004	−·004	−·003	−·002	−·002	−·001	0·000	0·000	+·001	+·002
34	−·007	−·006	−·005	−·005	−·004	−·003	−·003	−·002	−·001	−·001	0·000	+·001	+·001
35	−·007	−·006	−·006	−·005	−·004	−·004	−·003	−·002	−·002	−·001	0·000	0·000	+·001
36	−·007	−·007	−·006	−·005	−·005	−·004	−·003	−·003	−·002	−·002	−·001	0·000	0·000
37	−·008	−·007	−·007	−·006	−·005	−·005	−·004	−·003	−·003	−·002	−·001	−·001	0·000
38	−·008	−·008	−·007	−·006	−·006	−·005	−·004	−·004	−·003	−·002	−·002	−·001	0·000
39	−·009	−·008	−·007	−·007	−·006	−·005	−·005	−·004	−·003	−·003	−·002	−·001	−·001
40	−·009	−·008	−·008	−·007	−·006	−·006	−·005	−·004	−·004	−·003	−·002	−·002	−·001

**TABLE 1A/200**  
**NOMINAL CAPACITY 200 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/200).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	5
6	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	6
7	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	7
8	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	8
9	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.30	9
10	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.31	10
11	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	11
12	0.34	0.34	0.34	0.34	0.34	0.35	0.35	0.35	0.35	0.36	12
13	0.36	0.36	0.36	0.37	0.37	0.37	0.37	0.37	0.38	0.38	13
14	0.38	0.39	0.39	0.39	0.39	0.40	0.40	0.40	0.40	0.41	14
15	0.41	0.41	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.44	15
16	0.44	0.44	0.44	0.45	0.45	0.45	0.46	0.46	0.46	0.47	16
17	0.47	0.47	0.48	0.48	0.48	0.49	0.49	0.49	0.50	0.50	17
18	0.50	0.51	0.51	0.51	0.52	0.52	0.53	0.53	0.53	0.54	18
19	0.54	0.54	0.55	0.55	0.56	0.56	0.56	0.57	0.57	0.57	19
20	0.58	0.58	0.59	0.59	0.59	0.60	0.60	0.61	0.61	0.61	20
21	0.62	0.62	0.63	0.63	0.64	0.64	0.64	0.65	0.65	0.66	21
22	0.66	0.67	0.67	0.67	0.68	0.68	0.69	0.69	0.70	0.70	22
23	0.71	0.71	0.71	0.72	0.72	0.73	0.73	0.74	0.74	0.75	23
24	0.75	0.76	0.76	0.77	0.77	0.78	0.78	0.79	0.79	0.80	24
25	0.80	0.81	0.81	0.82	0.82	0.83	0.83	0.84	0.84	0.85	25
26	0.85	0.86	0.86	0.87	0.87	0.88	0.88	0.89	0.89	0.90	26
27	0.90	0.91	0.91	0.92	0.92	0.93	0.93	0.94	0.95	0.95	27
28	0.96	0.96	0.97	0.97	0.98	0.98	0.99	1.00	1.00	1.01	28
29	1.01	1.02	1.02	1.03	1.04	1.04	1.05	1.05	1.06	1.06	29
30	1.07	1.08	1.08	1.09	1.09	1.10	1.11	1.11	1.12	1.12	30
31	1.13	1.14	1.14	1.15	1.15	1.16	1.17	1.17	1.18	1.18	31
32	1.19	1.20	1.20	1.21	1.21	1.22	1.23	1.23	1.24	1.25	32
33	1.25	1.26	1.27	1.27	1.28	1.28	1.29	1.30	1.30	1.31	33
34	1.32	1.32	1.33	1.34	1.34	1.35	1.36	1.36	1.37	1.38	34
35	1.38	1.39	1.40	1.40	1.41	1.42	1.42	1.43	1.44	1.44	35
36	1.45	1.46	1.46	1.47	1.48	1.48	1.49	1.50	1.51	1.51	36
37	1.52	1.53	1.53	1.54	1.55	1.55	1.56	1.57	1.58	1.58	37
38	1.59	1.60	1.60	1.61	1.62	1.63	1.63	1.64	1.65	1.66	38
39	1.66	1.67	1.68	1.68	1.69	1.70	1.71	1.71	1.72	1.73	39
40	1.74	1.74	1.75	1.76	1.77	1.77	1.78	1.79	1.80	1.80	40

TABLE 2/200

NOMINAL CAPACITY 200 cm<sup>3</sup>

Allowance for temperature and pressure of air.

Add (+) to mass or subtract (-) from it.

TEMPERATURE OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·02	+·02	+·03
6	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·02	+·02	+·03
7	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·02	+·02
8	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·02
9	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·02
10	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02
11	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02
12	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02
13	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02
14	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02
15	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02
16	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02
17	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02
18	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01	+·02
19	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01
20	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·01
21	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01
22	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01
23	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01
24	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01
25	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01
26	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01
27	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01
28	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01
29	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01
30	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00	+·01
31	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00	0·00
32	-·01	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00
33	-·01	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00	0·00
34	-·01	-·01	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00
35	-·01	-·01	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00	0·00
36	-·01	-·01	-·01	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00	0·00
37	-·02	-·01	-·01	-·01	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00
38	-·02	-·02	-·01	-·01	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00	0·00
39	-·02	-·02	-·01	-·01	-·01	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00
40	-·02	-·02	-·02	-·01	-·01	-·01	-·01	-·01	-·01	-·01	0·00	0·00	0·00

**TABLE 1A/250**  
**NOMINAL CAPACITY 250 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )

Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
(in conjunction with Table 2/250).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	5
6	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	6
7	0.33	0.33	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34	7
8	0.34	0.34	0.34	0.35	0.35	0.35	0.35	0.35	0.35	0.36	8
9	0.36	0.36	0.36	0.36	0.36	0.37	0.37	0.37	0.37	0.37	9
10	0.37	0.38	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39	10
11	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.42	11
12	0.42	0.42	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	12
13	0.45	0.45	0.45	0.46	0.46	0.46	0.47	0.47	0.47	0.48	13
14	0.48	0.48	0.48	0.49	0.49	0.49	0.50	0.50	0.50	0.51	14
15	0.51	0.52	0.52	0.52	0.53	0.53	0.53	0.54	0.54	0.54	15
16	0.55	0.55	0.56	0.56	0.56	0.57	0.57	0.58	0.58	0.58	16
17	0.59	0.59	0.60	0.60	0.60	0.61	0.61	0.62	0.62	0.63	17
18	0.63	0.63	0.64	0.64	0.65	0.65	0.66	0.66	0.67	0.67	18
19	0.68	0.68	0.68	0.69	0.69	0.70	0.70	0.71	0.71	0.72	19
20	0.72	0.73	0.73	0.74	0.74	0.75	0.75	0.76	0.76	0.77	20
21	0.77	0.78	0.78	0.79	0.79	0.80	0.81	0.81	0.82	0.82	21
22	0.83	0.83	0.84	0.84	0.85	0.85	0.86	0.87	0.87	0.88	22
23	0.88	0.89	0.89	0.90	0.90	0.91	0.92	0.92	0.93	0.93	23
24	0.94	0.95	0.95	0.96	0.96	0.97	0.98	0.98	0.99	0.99	24
25	1.00	1.01	1.01	1.02	1.03	1.03	1.04	1.04	1.05	1.06	25
26	1.06	1.07	1.08	1.08	1.09	1.10	1.10	1.11	1.12	1.12	26
27	1.13	1.13	1.14	1.15	1.15	1.16	1.17	1.18	1.18	1.19	27
28	1.20	1.20	1.21	1.22	1.22	1.23	1.24	1.24	1.25	1.26	28
29	1.27	1.27	1.28	1.29	1.29	1.30	1.31	1.32	1.32	1.33	29
30	1.34	1.34	1.35	1.36	1.37	1.37	1.38	1.39	1.40	1.40	30
31	1.41	1.42	1.43	1.43	1.44	1.45	1.46	1.46	1.47	1.48	31
32	1.49	1.50	1.50	1.51	1.52	1.53	1.53	1.54	1.55	1.56	32
33	1.57	1.57	1.58	1.59	1.60	1.61	1.61	1.62	1.63	1.64	33
34	1.65	1.65	1.66	1.67	1.68	1.69	1.70	1.70	1.71	1.72	34
35	1.73	1.74	1.75	1.75	1.76	1.77	1.78	1.79	1.80	1.80	35
36	1.81	1.82	1.83	1.84	1.85	1.86	1.86	1.87	1.88	1.89	36
37	1.90	1.91	1.92	1.93	1.93	1.94	1.95	1.96	1.97	1.98	37
38	1.99	2.00	2.01	2.01	2.02	2.03	2.04	2.05	2.06	2.07	38
39	2.08	2.09	2.10	2.11	2.11	2.12	2.13	2.14	2.15	2.16	39
40	2.17	2.18	2.19	2.20	2.21	2.22	2.23	2.24	2.25	2.25	40

**TABLE 2/250**  
**NOMINAL CAPACITY 250 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (—) from it.

TEMPERATURE OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·03	+·03	+·03	+·03	+·03
6	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·02	+·03	+·03	+·03	+·03
7	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·03	+·03	+·03	+·03
8	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·03	+·03	+·03
9	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·03	+·03	+·03
10	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·03	+·03
11	0·00	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·02	+·03
12	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·03
13	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02	+·02
14	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02
15	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02	+·02
16	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02	+·02
17	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02
18	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02	+·02
19	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·02	+·02
20	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·02	+·02
21	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01	+·02
22	—·01	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·02
23	—·01	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01
24	—·01	—·01	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01	+·01
25	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01	+·01
26	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01
27	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01	+·01
28	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01	+·01
29	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01
30	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00	0·00	+·01	+·01
31	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00	0·00	+·01
32	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00	0·00	+·01
33	—·02	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00	0·00
34	—·02	—·02	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00
35	—·02	—·02	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00	0·00
36	—·02	—·02	—·02	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00
37	—·02	—·02	—·02	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00	0·00
38	—·02	—·02	—·02	—·02	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00	0·00
39	—·02	—·02	—·02	—·02	—·01	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00
40	—·02	—·02	—·02	—·02	—·02	—·01	—·01	—·01	—·01	—·01	—·01	0·00	0·00

**TABLE 1A/500**  
**NOMINAL CAPACITY 500 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/500).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.64	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.65	0.65	5
6	0.65	0.65	0.65	0.65	0.65	0.66	0.66	0.66	0.66	0.66	6
7	0.66	0.67	0.67	0.67	0.67	0.67	0.68	0.68	0.68	0.68	7
8	0.68	0.69	0.69	0.69	0.70	0.70	0.70	0.70	0.71	0.71	8
9	0.71	0.72	0.72	0.72	0.73	0.73	0.73	0.74	0.74	0.75	9
10	0.75	0.75	0.76	0.76	0.77	0.77	0.77	0.78	0.78	0.79	10
11	0.79	0.80	0.80	0.81	0.81	0.81	0.82	0.82	0.83	0.83	11
12	0.84	0.85	0.85	0.86	0.86	0.87	0.87	0.88	0.88	0.89	12
13	0.90	0.90	0.91	0.91	0.92	0.93	0.93	0.94	0.94	0.95	13
14	0.96	0.96	0.97	0.98	0.98	0.99	1.00	1.00	1.01	1.02	14
15	1.02	1.03	1.04	1.05	1.05	1.06	1.07	1.07	1.08	1.09	15
16	1.10	1.10	1.11	1.12	1.13	1.14	1.14	1.15	1.16	1.17	16
17	1.18	1.18	1.19	1.20	1.21	1.22	1.23	1.23	1.24	1.25	17
18	1.26	1.27	1.28	1.29	1.30	1.31	1.31	1.32	1.33	1.34	18
19	1.35	1.36	1.37	1.38	1.39	1.40	1.41	1.42	1.43	1.44	19
20	1.45	1.46	1.47	1.48	1.49	1.50	1.51	1.52	1.53	1.54	20
21	1.55	1.56	1.57	1.58	1.59	1.60	1.61	1.62	1.63	1.64	21
22	1.65	1.66	1.67	1.69	1.70	1.71	1.72	1.73	1.74	1.75	22
23	1.76	1.78	1.79	1.80	1.81	1.82	1.83	1.84	1.86	1.87	23
24	1.88	1.89	1.90	1.92	1.93	1.94	1.95	1.96	1.98	1.99	24
25	2.00	2.01	2.03	2.04	2.05	2.06	2.08	2.09	2.10	2.11	25
26	2.13	2.14	2.15	2.16	2.18	2.19	2.20	2.22	2.23	2.24	26
27	2.26	2.27	2.28	2.30	2.31	2.32	2.34	2.35	2.36	2.38	27
28	2.39	2.41	2.42	2.43	2.45	2.46	2.47	2.49	2.50	2.52	28
29	2.53	2.54	2.56	2.57	2.59	2.60	2.62	2.63	2.65	2.66	29
30	2.67	2.69	2.70	2.72	2.73	2.75	2.76	2.78	2.79	2.81	30
31	2.82	2.84	2.85	2.87	2.88	2.90	2.91	2.93	2.94	2.96	31
32	2.97	2.99	3.01	3.02	3.04	3.05	3.07	3.08	3.10	3.12	32
33	3.13	3.15	3.16	3.18	3.20	3.21	3.23	3.24	3.26	3.28	33
34	3.29	3.31	3.32	3.34	3.36	3.37	3.39	3.41	3.42	3.44	34
35	3.46	3.47	3.49	3.51	3.52	3.54	3.56	3.57	3.59	3.61	35
36	3.63	3.64	3.66	3.68	3.69	3.71	3.73	3.75	3.76	3.78	36
37	3.80	3.82	3.83	3.85	3.87	3.89	3.90	3.92	3.94	3.96	37
38	3.98	3.99	4.01	4.03	4.05	4.07	4.08	4.10	4.12	4.14	38
39	4.16	4.17	4.19	4.21	4.23	4.25	4.27	4.28	4.30	4.32	39
40	4.34	4.36	4.38	4.40	4.42	4.43	4.45	4.47	4.49	4.51	40

**TABLE 2/500**  
**NOMINAL CAPACITY 500 cm<sup>3</sup>**

Allowance for temperature and pressure of air.  
 Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·02	+·02	+·03	+·03	+·04	+·04	+·04	+·05	+·05	+·05	+·06	+·06	+·07
6	+·02	+·02	+·03	+·03	+·03	+·04	+·04	+·04	+·05	+·05	+·06	+·06	+·06
7	+·02	+·02	+·02	+·03	+·03	+·04	+·04	+·04	+·05	+·05	+·05	+·06	+·06
8	+·02	+·02	+·02	+·03	+·03	+·03	+·04	+·04	+·04	+·05	+·05	+·06	+·06
9	+·01	+·02	+·02	+·02	+·03	+·03	+·04	+·04	+·04	+·05	+·05	+·05	+·06
10	+·01	+·02	+·02	+·02	+·03	+·03	+·03	+·04	+·04	+·04	+·05	+·05	+·05
11	+·01	+·01	+·02	+·02	+·02	+·03	+·03	+·03	+·04	+·04	+·05	+·05	+·05
12	+·01	+·01	+·01	+·02	+·02	+·03	+·03	+·03	+·04	+·04	+·04	+·05	+·05
13	+·01	+·01	+·01	+·02	+·02	+·02	+·03	+·03	+·03	+·04	+·04	+·04	+·05
14	0·00	+·01	+·01	+·01	+·02	+·02	+·03	+·03	+·03	+·04	+·04	+·04	+·05
15	0·00	+·01	+·01	+·01	+·02	+·02	+·02	+·03	+·03	+·03	+·04	+·04	+·04
16	0·00	0·00	+·01	+·01	+·01	+·02	+·02	+·02	+·03	+·03	+·04	+·04	+·04
17	0·00	0·00	+·01	+·01	+·01	+·02	+·02	+·02	+·03	+·03	+·03	+·04	+·04
18	0·00	0·00	0·00	+·01	+·01	+·01	+·02	+·02	+·02	+·03	+·03	+·03	+·04
19	−·01	0·00	0·00	0·00	+·01	+·01	+·02	+·02	+·02	+·03	+·03	+·03	+·04
20	−·01	0·00	0·00	0·00	+·01	+·01	+·01	+·02	+·02	+·02	+·03	+·03	+·03
21	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01	+·02	+·02	+·03	+·03	+·03
22	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01	+·02	+·02	+·02	+·03	+·03
23	−·01	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01	+·02	+·02	+·02	+·03
24	−·02	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01	+·02	+·02	+·02	+·03
25	−·02	−·01	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01	+·02	+·02	+·02
26	−·02	−·02	−·01	−·01	−·01	0·00	0·00	+·01	+·01	+·01	−·02	+·02	+·02
27	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01	+·02	+·02
28	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01	+·02
29	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01	+·02
30	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01
31	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00	+·01	+·01	+·01
32	−·03	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00	+·01	+·01
33	−·03	−·03	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00	+·01
34	−·03	−·03	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00	+·01
35	−·04	−·03	−·03	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00
36	−·04	−·03	−·03	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00	0·00
37	−·04	−·04	−·03	−·03	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00
38	−·04	−·04	−·03	−·03	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00	0·00
39	−·04	−·04	−·04	−·03	−·03	−·03	−·02	−·02	−·02	−·01	−·01	−·01	0·00
40	−·04	−·04	−·04	−·03	−·03	−·03	−·03	−·02	−·02	−·02	−·01	−·01	−·01

**TABLE 1A/1 000**  
**NOMINAL CAPACITY 1 000 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/1 000).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	1.28	1.28	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.30	5
6	1.30	1.30	1.30	1.30	1.31	1.31	1.31	1.32	1.32	1.32	6
7	1.33	1.33	1.33	1.34	1.34	1.35	1.35	1.36	1.36	1.36	7
8	1.37	1.37	1.38	1.39	1.39	1.40	1.40	1.41	1.41	1.42	8
9	1.43	1.43	1.44	1.45	1.45	1.46	1.47	1.48	1.48	1.49	9
10	1.50	1.51	1.51	1.52	1.53	1.54	1.55	1.56	1.56	1.57	10
11	1.58	1.59	1.60	1.61	1.62	1.63	1.64	1.65	1.66	1.67	11
12	1.68	1.69	1.70	1.71	1.72	1.73	1.74	1.76	1.77	1.78	12
13	1.79	1.80	1.81	1.83	1.84	1.85	1.86	1.87	1.89	1.90	13
14	1.91	1.93	1.94	1.95	1.97	1.98	1.99	2.01	2.02	2.03	14
15	2.05	2.06	2.08	2.09	2.10	2.12	2.13	2.15	2.16	2.18	15
16	2.19	2.21	2.22	2.24	2.26	2.27	2.29	2.30	2.32	2.34	16
17	2.35	2.37	2.39	2.40	2.42	2.44	2.45	2.47	2.49	2.50	17
18	2.52	2.54	2.56	2.57	2.59	2.61	2.63	2.65	2.66	2.68	18
19	2.70	2.72	2.74	2.76	2.78	2.80	2.81	2.83	2.85	2.87	19
20	2.89	2.91	2.93	2.95	2.97	2.99	3.01	3.03	3.05	3.07	20
21	3.09	3.11	3.14	3.16	3.18	3.20	3.22	3.24	3.26	3.28	21
22	3.31	3.33	3.35	3.37	3.39	3.42	3.44	3.46	3.48	3.51	22
23	3.53	3.55	3.57	3.60	3.62	3.64	3.67	3.69	3.71	3.74	23
24	3.76	3.78	3.81	3.83	3.86	3.88	3.90	3.93	3.95	3.98	24
25	4.00	4.03	4.05	4.08	4.10	4.13	4.15	4.18	4.20	4.23	25
26	4.25	4.28	4.30	4.33	4.36	4.38	4.41	4.43	4.46	4.49	26
27	4.51	4.54	4.57	4.59	4.62	4.65	4.67	4.70	4.73	4.76	27
28	4.78	4.81	4.84	4.87	4.89	4.92	4.95	4.98	5.00	5.03	28
29	5.06	5.09	5.12	5.15	5.18	5.20	5.23	5.26	5.29	5.32	29
30	5.35	5.38	5.41	5.44	5.47	5.50	5.53	5.56	5.58	5.61	30
31	5.64	5.68	5.71	5.74	5.77	5.80	5.83	5.86	5.89	5.92	31
32	5.95	5.98	6.01	6.04	6.07	6.11	6.14	6.17	6.20	6.23	32
33	6.26	6.29	6.33	6.36	6.39	6.42	6.45	6.49	6.52	6.55	33
34	6.58	6.62	6.65	6.68	6.72	6.75	6.78	6.81	6.85	6.88	34
35	6.91	6.95	6.98	7.01	7.05	7.08	7.12	7.15	7.18	7.22	35
36	7.25	7.29	7.32	7.35	7.39	7.42	7.46	7.49	7.53	7.56	36
37	7.60	7.63	7.67	7.70	7.74	7.77	7.81	7.84	7.88	7.92	37
38	7.95	7.99	8.02	8.06	8.09	8.13	8.17	8.20	8.24	8.28	38
39	8.31	8.35	8.39	8.42	8.46	8.50	8.53	8.57	8.61	8.64	39
40	8.68	8.72	8.76	8.79	8.83	8.87	8.91	8.94	8.98	9.02	40



TABLE 2/1 000

NOMINAL CAPACITY 1 000 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·04	+·05	+·06	+·06	+·07	+·08	+·09	+·09	+·10	+·11	+·12	+·12	+·13
6	+·04	+·05	+·05	+·06	+·07	+·08	+·08	+·09	+·10	+·10	+·11	+·12	+·13
7	+·03	+·04	+·05	+·06	+·06	+·07	+·08	+·09	+·09	+·10	+·11	+·11	+·12
8	+·03	+·04	+·05	+·05	+·06	+·07	+·07	+·08	+·09	+·10	+·10	+·11	+·12
9	+·03	+·03	+·04	+·05	+·06	+·06	+·07	+·08	+·08	+·09	+·10	+·11	+·11
10	+·02	+·03	+·04	+·04	+·05	+·06	+·07	+·07	+·08	+·09	+·10	+·10	+·11
11	+·02	+·03	+·03	+·04	+·05	+·05	+·06	+·07	+·08	+·08	+·09	+·10	+·11
12	+·02	+·02	+·03	+·04	+·04	+·05	+·06	+·07	+·07	+·08	+·09	+·09	+·10
13	+·01	+·02	+·03	+·03	+·04	+·05	+·05	+·06	+·07	+·08	+·08	+·09	+·10
14	+·01	+·01	+·02	+·03	+·04	+·04	+·05	+·06	+·06	+·07	+·08	+·09	+·09
15	0·00	+·01	+·02	+·02	+·03	+·04	+·05	+·05	+·06	+·07	+·07	+·08	+·09
16	0·00	+·01	+·01	+·02	+·03	+·04	+·04	+·05	+·06	+·06	+·07	+·08	+·08
17	0·00	0·00	+·01	+·02	+·02	+·03	+·04	+·05	+·05	+·06	+·07	+·07	+·08
18	−·01	0·00	+·01	+·01	+·02	+·03	+·03	+·04	+·05	+·06	+·06	+·07	+·08
19	−·01	0·00	0·00	+·01	+·02	+·02	+·03	+·04	+·04	+·05	+·06	+·07	+·07
20	−·02	−·01	0·00	+·01	+·01	+·02	+·03	+·03	+·04	+·05	+·05	+·06	+·07
21	−·02	−·01	−·01	0·00	+·01	+·02	+·02	+·03	+·04	+·04	+·05	+·06	+·06
22	−·02	−·02	−·01	0·00	+·01	+·01	+·02	+·03	+·03	+·04	+·05	+·05	+·06
23	−·03	−·02	−·01	−·01	0·00	+·01	+·01	+·02	+·03	+·04	+·04	+·05	+·06
24	−·03	−·02	−·02	−·01	0·00	0·00	+·01	+·02	+·02	+·03	+·04	+·05	+·05
25	−·03	−·03	−·02	−·01	−·01	0·00	+·01	+·01	+·02	+·03	+·03	+·04	+·05
26	−·04	−·03	−·02	−·02	−·01	0·00	0·00	+·01	+·02	+·02	+·03	+·04	+·04
27	−·04	−·03	−·03	−·02	−·01	−·01	0·00	+·01	+·01	+·02	+·03	+·03	+·04
28	−·04	−·04	−·03	−·02	−·02	−·01	0·00	0·00	+·01	+·02	+·02	+·03	+·04
29	−·05	−·04	−·04	−·03	−·02	−·01	−·01	0·00	+·01	+·01	+·02	+·03	+·03
30	−·05	−·05	−·04	−·03	−·03	−·02	−·01	−·01	0·00	+·01	+·02	+·02	+·03
31	−·06	−·05	−·04	−·04	−·03	−·02	−·02	−·01	0·00	0·00	+·01	+·02	+·02
32	−·06	−·05	−·05	−·04	−·03	−·03	−·02	−·01	−·01	0·00	+·01	+·01	+·02
33	−·06	−·06	−·05	−·04	−·04	−·03	−·02	−·02	−·01	0·00	0·00	+·01	+·02
34	−·07	−·06	−·05	−·05	−·04	−·03	−·03	−·02	−·01	−·01	0·00	+·01	+·01
35	−·07	−·06	−·06	−·05	−·04	−·04	−·03	−·02	−·02	−·01	0·00	0·00	+·01
36	−·07	−·07	−·06	−·05	−·05	−·04	−·03	−·03	−·02	−·02	−·01	0·00	0·00
37	−·08	−·07	−·07	−·06	−·05	−·05	−·04	−·03	−·03	−·02	−·01	−·01	0·00
38	−·08	−·08	−·07	−·06	−·06	−·05	−·04	−·04	−·03	−·02	−·02	−·01	0·00
39	−·09	−·08	−·07	−·07	−·06	−·05	−·05	−·04	−·03	−·03	−·02	−·01	−·01
40	−·09	−·08	−·08	−·07	−·06	−·06	−·05	−·04	−·04	−·03	−·02	−·02	−·01

TABLE 1A/1 500

NOMINAL CAPACITY 1 500 cm<sup>3</sup>

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/1 500).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	5
6	1.95	1.95	1.95	1.96	1.96	1.97	1.97	1.97	1.98	1.98	6
7	1.99	2.00	2.00	2.01	2.01	2.02	2.03	2.03	2.04	2.05	7
8	2.05	2.06	2.07	2.08	2.09	2.09	2.10	2.11	2.12	2.13	8
9	2.14	2.15	2.16	2.17	2.18	2.19	2.20	2.21	2.22	2.24	9
10	2.25	2.26	2.27	2.28	2.30	2.31	2.32	2.33	2.35	2.36	10
11	2.37	2.39	2.40	2.42	2.43	2.44	2.46	2.47	2.49	2.50	11
12	2.52	2.54	2.55	2.57	2.58	2.60	2.62	2.63	2.65	2.67	12
13	2.69	2.70	2.72	2.74	2.76	2.78	2.79	2.81	2.83	2.85	13
14	2.87	2.89	2.91	2.93	2.95	2.97	2.99	3.01	3.03	3.05	14
15	3.07	3.09	3.11	3.14	3.16	3.18	3.20	3.22	3.25	3.27	15
16	3.29	3.31	3.34	3.36	3.38	3.41	3.43	3.46	3.48	3.50	16
17	3.53	3.55	3.58	3.60	3.63	3.65	3.68	3.70	3.73	3.76	17
18	3.78	3.81	3.83	3.86	3.89	3.92	3.94	3.97	4.00	4.02	18
19	4.05	4.08	4.11	4.14	4.17	4.19	4.22	4.25	4.28	4.31	19
20	4.34	4.37	4.40	4.43	4.46	4.49	4.52	4.55	4.58	4.61	20
21	4.64	4.67	4.70	4.74	4.77	4.80	4.83	4.86	4.89	4.93	21
22	4.96	4.99	5.02	5.06	5.09	5.12	5.16	5.19	5.22	5.26	22
23	5.29	5.33	5.36	5.39	5.43	5.46	5.50	5.53	5.57	5.60	23
24	5.64	5.68	5.71	5.75	5.78	5.82	5.86	5.89	5.93	5.97	24
25	6.00	6.04	6.08	6.11	6.15	6.19	6.23	6.26	6.30	6.34	25
26	6.38	6.42	6.46	6.49	6.53	6.57	6.61	6.65	6.69	6.73	26
27	6.77	6.81	6.85	6.89	6.93	6.97	7.01	7.05	7.09	7.13	27
28	7.17	7.22	7.26	7.30	7.34	7.38	7.42	7.46	7.51	7.55	28
29	7.59	7.63	7.68	7.72	7.76	7.81	7.85	7.89	7.94	7.98	29
30	8.02	8.07	8.11	8.15	8.20	8.24	8.29	8.33	8.38	8.42	30
31	8.47	8.51	8.56	8.60	8.65	8.69	8.74	8.79	8.83	8.88	31
32	8.92	8.97	9.02	9.06	9.11	9.16	9.20	9.25	9.30	9.35	32
33	9.39	9.44	9.49	9.54	9.59	9.63	9.68	9.73	9.78	9.83	33
34	9.88	9.93	9.97	10.02	10.07	10.12	10.17	10.22	10.27	10.32	34
35	10.37	10.42	10.47	10.52	10.57	10.62	10.67	10.72	10.78	10.83	35
36	10.88	10.93	10.98	11.03	11.08	11.14	11.19	11.24	11.29	11.34	36
37	11.40	11.45	11.50	11.55	11.61	11.66	11.71	11.77	11.82	11.87	37
38	11.93	11.98	12.03	12.09	12.14	12.20	12.25	12.30	12.36	12.41	38
39	12.47	12.52	12.58	12.63	12.69	12.74	12.80	12.85	12.91	12.97	39
40	13.02	13.08	13.13	13.19	13.25	13.30	13.36	13.42	13.47	13.53	40

TABLE 2/1 500

NOMINAL CAPACITY 1 500 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·06	+·07	+·09	+·10	+·11	+·12	+·13	+·14	+·15	+·16	+·17	+·19	+·20
6	+·06	+·07	+·08	+·09	+·10	+·11	+·12	+·13	+·15	+·15	+·17	+·18	+·19
7	+·05	+·06	+·07	+·08	+·10	+·11	+·12	+·13	+·14	+·15	+·16	+·17	+·18
8	+·05	+·06	+·07	+·08	+·09	+·10	+·11	+·12	+·13	+·14	+·16	+·17	+·18
9	+·04	+·05	+·06	+·07	+·08	+·09	+·11	+·12	+·13	+·14	+·15	+·16	+·17
10	+·03	+·05	+·06	+·07	+·08	+·09	+·10	+·11	+·12	+·13	+·14	+·15	+·16
11	+·03	+·04	+·05	+·06	+·07	+·08	+·09	+·10	+·11	+·13	+·14	+·15	+·16
12	+·02	+·03	+·04	+·06	+·07	+·08	+·09	+·10	+·11	+·12	+·13	+·14	+·15
13	+·02	+·03	+·04	+·05	+·06	+·07	+·08	+·09	+·10	+·11	+·12	+·13	+·15
14	+·01	+·02	+·03	+·04	+·05	+·06	+·08	+·09	+·10	+·11	+·12	+·13	+·14
15	+·01	+·02	+·03	+·04	+·05	+·06	+·07	+·08	+·09	+·10	+·11	+·12	+·13
16	0·00	+·01	+·02	+·03	+·04	+·05	+·06	+·07	+·08	+·10	+·11	+·12	+·13
17	−·01	0·00	+·02	+·03	+·04	+·05	+·06	+·07	+·08	+·09	+·10	+·11	+·12
18	−·01	0·00	+·01	+·02	+·03	+·04	+·05	+·06	+·07	+·08	+·09	+·10	+·11
19	−·02	−·01	0·00	+·01	+·02	+·04	+·05	+·06	+·07	+·08	+·09	+·10	+·11
20	−·02	−·01	0·00	+·01	+·02	+·03	+·04	+·05	+·06	+·07	+·08	+·09	+·10
21	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04	+·05	+·07	+·08	+·09	+·10
22	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04	+·05	+·06	+·07	+·08	+·09
23	−·04	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04	+·05	+·06	+·07	+·08
24	−·05	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04	+·05	+·06	+·07	+·08
25	−·05	−·04	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04	+·05	+·06	+·07
26	−·06	−·05	−·04	−·03	−·02	−·01	+·01	+·02	+·03	+·04	+·05	+·06	+·07
27	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04	+·05	+·06
28	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04	+·05
29	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04	+·05
30	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04
31	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01	+·02	+·03	+·04
32	−·09	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01	+·02	+·03
33	−·10	−·09	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01	+·03
34	−·10	−·09	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01	+·02
35	−·11	−·10	−·09	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01
36	−·11	−·10	−·09	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00	+·01
37	−·12	−·11	−·10	−·09	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00
38	−·12	−·11	−·10	−·09	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01	0·00
39	−·13	−·12	−·11	−·10	−·09	−·08	−·07	−·06	−·05	−·04	−·03	−·02	−·01
40	−·13	−·12	−·11	−·10	−·09	−·09	−·08	−·07	−·06	−·05	−·04	−·03	−·02

TABLE 1A/2 000

NOMINAL CAPACITY 2 000 cm<sup>3</sup>

(Coefficient of cubical thermal expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/2 000).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	2.57	2.57	2.57	2.57	2.58	2.58	2.58	2.58	2.59	2.59	5
6	2.60	2.60	2.60	2.61	2.61	2.62	2.63	2.63	2.64	2.65	6
7	2.65	2.66	2.67	2.68	2.68	2.69	2.70	2.71	2.72	2.73	7
8	2.74	2.75	2.76	2.77	2.78	2.79	2.80	2.82	2.83	2.84	8
9	2.85	2.87	2.88	2.89	2.91	2.92	2.94	2.95	2.97	2.98	9
10	3.00	3.01	3.03	3.04	3.06	3.08	3.09	3.11	3.13	3.15	10
11	3.16	3.18	3.20	3.22	3.24	3.26	3.28	3.30	3.32	3.34	11
12	3.36	3.38	3.40	3.42	3.45	3.47	3.49	3.51	3.53	3.56	12
13	3.58	3.60	3.63	3.65	3.68	3.70	3.72	3.75	3.77	3.80	13
14	3.83	3.85	3.88	3.90	3.93	3.96	3.98	4.01	4.04	4.07	14
15	4.10	4.12	4.15	4.18	4.21	4.24	4.27	4.30	4.33	4.36	15
16	4.39	4.42	4.45	4.48	4.51	4.54	4.58	4.61	4.64	4.67	16
17	4.70	4.74	4.77	4.80	4.84	4.87	4.90	4.94	4.97	5.01	17
18	5.04	5.08	5.11	5.15	5.18	5.22	5.26	5.29	5.33	5.37	18
19	5.40	5.44	5.48	5.52	5.55	5.59	5.63	5.67	5.71	5.75	19
20	5.79	5.82	5.86	5.90	5.94	5.98	6.02	6.07	6.11	6.15	20
21	6.19	6.23	6.27	6.31	6.36	6.40	6.44	6.48	6.53	6.57	21
22	6.61	6.66	6.70	6.74	6.79	6.83	6.88	6.92	6.97	7.01	22
23	7.06	7.10	7.15	7.19	7.24	7.29	7.33	7.38	7.43	7.47	23
24	7.52	7.57	7.61	7.66	7.71	7.76	7.81	7.86	7.90	7.95	24
25	8.00	8.05	8.10	8.15	8.20	8.25	8.30	8.35	8.40	8.45	25
26	8.50	8.56	8.61	8.66	8.71	8.76	8.82	8.87	8.92	8.97	26
27	9.03	9.08	9.13	9.19	9.24	9.29	9.35	9.40	9.46	9.51	27
28	9.57	9.62	9.68	9.73	9.79	9.84	9.90	9.95	10.01	10.07	28
29	10.12	10.18	10.24	10.29	10.35	10.41	10.47	10.52	10.58	10.64	29
30	10.70	10.76	10.81	10.87	10.93	10.99	11.05	11.11	11.17	11.23	30
31	11.29	11.35	11.41	11.47	11.53	11.59	11.65	11.71	11.78	11.84	31
32	11.90	11.96	12.02	12.09	12.15	12.21	12.27	12.34	12.40	12.46	32
33	12.53	12.59	12.65	12.72	12.78	12.85	12.91	12.97	13.04	13.10	33
34	13.17	13.23	13.30	13.36	13.43	13.50	13.56	13.63	13.69	13.76	34
35	13.83	13.90	13.96	14.03	14.10	14.16	14.23	14.30	14.37	14.44	35
36	14.50	14.57	14.64	14.71	14.78	14.85	14.92	14.99	15.06	15.13	36
37	15.19	15.27	15.34	15.41	15.48	15.55	15.62	15.69	15.76	15.83	37
38	15.90	15.97	16.05	16.12	16.19	16.26	16.33	16.41	16.48	16.55	38
39	16.62	16.70	16.77	16.84	16.92	16.99	17.07	17.14	17.21	17.29	39
40	17.36	17.44	17.51	17.59	17.66	17.74	17.81	17.89	17.96	18.04	40

TABLE 2/2 000

NOMINAL CAPACITY 2 000 cm<sup>3</sup>

Allowance for temperature and pressure of air.  
Add (+) to mass or subtract (−) from it.

TEMPERATURE OF AIR °C	PRESSURE OF AIR IN mmHg												
	730	735	740	745	750	755	760	765	770	775	780	785	790
5	+·09	+·10	+·11	+·13	+·14	+·16	+·17	+·19	+·20	+·22	+·23	+·25	+·26
6	+·08	+·09	+·11	+·12	+·14	+·15	+·17	+·18	+·19	+·21	+·22	+·24	+·25
7	+·07	+·08	+·10	+·11	+·13	+·14	+·16	+·17	+·19	+·20	+·22	+·23	+·24
8	+·06	+·08	+·09	+·11	+·12	+·13	+·15	+·16	+·18	+·19	+·21	+·22	+·24
9	+·05	+·07	+·08	+·10	+·11	+·13	+·14	+·16	+·17	+·18	+·20	+·21	+·23
10	+·05	+·06	+·07	+·09	+·10	+·12	+·13	+·15	+·16	+·18	+·19	+·20	+·22
11	+·04	+·05	+·07	+·08	+·10	+·11	+·12	+·14	+·15	+·17	+·18	+·20	+·21
12	+·03	+·04	+·06	+·07	+·09	+·10	+·12	+·13	+·15	+·16	+·17	+·19	+·20
13	+·02	+·04	+·05	+·07	+·08	+·09	+·11	+·12	+·14	+·15	+·17	+·18	+·19
14	+·02	+·03	+·04	+·06	+·07	+·09	+·10	+·11	+·13	+·14	+·16	+·17	+·19
15	+·01	+·02	+·04	+·05	+·06	+·08	+·09	+·11	+·12	+·13	+·15	+·16	+·18
16	0·00	+·01	+·03	+·04	+·06	+·07	+·08	+·10	+·11	+·13	+·14	+·16	+·17
17	−·01	+·01	+·02	+·03	+·05	+·06	+·08	+·09	+·10	+·12	+·13	+·15	+·16
18	−·02	0·00	+·01	+·03	+·04	+·05	+·07	+·08	+·10	+·11	+·12	+·14	+·15
19	−·02	−·01	+·01	+·02	+·03	+·05	+·06	+·08	+·09	+·10	+·12	+·13	+·14
20	−·03	−·02	0·00	+·01	+·03	+·04	+·05	+·07	+·08	+·10	+·11	+·12	+·14
21	−·04	−·02	−·01	0·00	+·02	+·03	+·05	+·06	+·07	+·09	+·10	+·11	+·13
22	−·05	−·03	−·02	0·00	+·01	+·02	+·04	+·05	+·07	+·08	+·09	+·11	+·12
23	−·05	−·04	−·03	−·01	0·00	+·02	+·03	+·04	+·06	+·07	+·09	+·10	+·11
24	−·06	−·05	−·03	−·02	−·01	+·01	+·02	+·04	+·05	+·06	+·08	+·09	+·10
25	−·07	−·05	−·04	−·03	−·01	0·00	+·01	+·03	+·04	+·06	+·07	+·08	+·10
26	−·08	−·06	−·05	−·03	−·02	−·01	+·01	+·02	+·03	+·05	+·06	+·08	+·09
27	−·08	−·07	−·06	−·04	−·03	−·01	0·00	+·01	+·03	+·04	+·05	+·07	+·08
28	−·09	−·08	−·06	−·05	−·04	−·02	−·01	+·01	+·02	+·03	+·05	+·06	+·07
29	−·10	−·08	−·07	−·06	−·04	−·03	−·02	0·00	+·01	+·02	+·04	+·05	+·06
30	−·10	−·09	−·08	−·06	−·05	−·04	−·02	−·01	0·00	+·02	+·03	+·04	+·06
31	−·11	−·10	−·09	−·07	−·06	−·04	−·03	−·02	0·00	+·01	+·02	+·04	+·05
32	−·12	−·11	−·09	−·08	−·07	−·05	−·04	−·03	−·01	0·00	+·01	+·03	+·04
33	−·13	−·11	−·10	−·09	−·07	−·06	−·05	−·03	−·02	−·01	+·01	+·02	+·03
34	−·13	−·12	−·11	−·09	−·08	−·07	−·05	−·04	−·03	−·01	0·00	+·01	+·03
35	−·14	−·13	−·12	−·10	−·09	−·08	−·06	−·05	−·04	−·02	−·01	0·00	+·02
36	−·15	−·14	−·12	−·11	−·10	−·08	−·07	−·06	−·04	−·03	−·02	0·00	+·01
37	−·16	−·14	−·13	−·12	−·10	−·09	−·08	−·06	−·05	−·04	−·02	−·01	0·00
38	−·16	−·15	−·14	−·12	−·11	−·10	−·09	−·07	−·06	−·05	−·03	−·02	−·01
39	−·17	−·16	−·15	−·13	−·12	−·11	−·09	−·08	−·07	−·05	−·04	−·03	−·01
40	−·18	−·17	−·15	−·14	−·13	−·11	−·10	−·09	−·07	−·06	−·05	−·04	−·02

TABLE 1B/1 000

NOMINAL CAPACITY 1 000 cm<sup>3</sup>(Coefficient of cubical thermal expansion of glass  $15 \times 10^{-6}/^{\circ}\text{C}$ )Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
(in conjunction with Table 2/1 000).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	1.39	1.39	1.39	1.39	1.40	1.40	1.40	1.40	1.40	1.40	5
6	1.40	1.40	1.41	1.41	1.41	1.41	1.41	1.42	1.42	1.42	6
7	1.43	1.43	1.43	1.44	1.44	1.44	1.45	1.45	1.46	1.46	7
8	1.46	1.47	1.47	1.48	1.48	1.49	1.49	1.50	1.51	1.51	8
9	1.52	1.52	1.53	1.54	1.54	1.55	1.55	1.56	1.57	1.58	9
10	1.58	1.59	1.60	1.61	1.61	1.62	1.63	1.64	1.65	1.65	10
11	1.66	1.67	1.68	1.69	1.70	1.71	1.72	1.73	1.74	1.75	11
12	1.75	1.76	1.77	1.79	1.80	1.81	1.82	1.83	1.84	1.85	12
13	1.86	1.87	1.88	1.89	1.91	1.92	1.93	1.94	1.95	1.97	13
14	1.98	1.99	2.00	2.02	2.03	2.04	2.05	2.07	2.08	2.09	14
15	2.11	2.12	2.13	2.15	2.16	2.18	2.19	2.21	2.22	2.23	15
16	2.25	2.26	2.28	2.29	2.31	2.32	2.34	2.35	2.37	2.39	16
17	2.40	2.42	2.43	2.45	2.47	2.48	2.50	2.52	2.53	2.55	17
18	2.57	2.58	2.60	2.62	2.64	2.65	2.67	2.69	2.71	2.72	18
19	2.74	2.76	2.78	2.80	2.81	2.82	2.85	2.87	2.89	2.91	19
20	2.93	2.95	2.97	2.99	3.00	3.02	3.04	3.06	3.08	3.10	20
21	3.12	3.14	3.16	3.19	3.21	3.23	3.25	3.27	3.29	3.31	21
22	3.33	3.35	3.37	3.40	3.42	3.44	3.46	3.48	3.50	3.53	22
23	3.55	3.57	3.59	3.61	3.64	3.66	3.68	3.71	3.73	3.75	23
24	3.77	3.80	3.82	3.84	3.87	3.89	3.92	3.94	3.96	3.99	24
25	4.01	4.04	4.06	4.08	4.11	4.13	4.16	4.18	4.21	4.23	25
26	4.26	4.28	4.31	4.33	4.36	4.38	4.41	4.44	4.46	4.49	26
27	4.51	4.54	4.57	4.59	4.62	4.64	4.67	4.70	4.72	4.75	27
28	4.78	4.80	4.83	4.86	4.89	4.91	4.94	4.97	5.00	5.02	28
29	5.05	5.08	5.11	5.14	5.16	5.19	5.22	5.25	5.28	5.31	29
30	5.33	5.36	5.39	5.42	5.45	5.48	5.51	5.54	5.57	5.60	30
31	5.63	5.65	5.68	5.71	5.74	5.77	5.80	5.83	5.86	5.89	31
32	5.92	5.96	5.99	6.02	6.05	6.08	6.11	6.14	6.17	6.20	32
33	6.23	6.26	6.30	6.33	6.36	6.39	6.42	6.45	6.49	6.52	33
34	6.55	6.58	6.61	6.65	6.68	6.71	6.74	6.78	6.81	6.84	34
35	6.87	6.91	6.94	6.97	7.01	7.04	7.07	7.11	7.14	7.17	35
36	7.21	7.24	7.27	7.31	7.34	7.38	7.41	7.44	7.48	7.51	36
37	7.55	7.58	7.62	7.65	7.69	7.72	7.76	7.79	7.83	7.86	37
38	7.90	7.93	7.97	8.00	8.04	8.07	8.11	8.15	8.18	8.22	38
39	8.25	8.29	8.32	8.36	8.40	8.43	8.47	8.51	8.54	8.58	39
40	8.62	8.65	8.69	8.73	8.76	8.80	8.84	8.88	8.91	8.95	40

**TABLE 1C/1 000**  
**NOMINAL CAPACITY 1 000 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $25 \times 10^{-6}/^{\circ}\text{C}$ )

Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/1 000).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	5
6	1.61	1.61	1.61	1.61	1.62	1.62	1.62	1.62	1.62	1.62	6
7	1.63	1.63	1.63	1.63	1.64	1.64	1.64	1.64	1.65	1.65	7
8	1.65	1.66	1.66	1.67	1.67	1.67	1.68	1.68	1.69	1.69	8
9	1.70	1.70	1.71	1.71	1.72	1.72	1.73	1.73	1.74	1.75	9
10	1.75	1.76	1.77	1.77	1.78	1.79	1.79	1.80	1.81	1.81	10
11	1.82	1.83	1.84	1.85	1.85	1.86	1.87	1.88	1.89	1.90	11
12	1.90	1.91	1.92	1.93	1.94	1.95	1.96	1.97	1.98	1.99	12
13	2.00	2.01	2.02	2.03	2.04	2.05	2.06	2.07	2.09	2.10	13
14	2.11	2.12	2.13	2.14	2.15	2.17	2.18	2.19	2.20	2.21	14
15	2.23	2.24	2.25	2.27	2.28	2.29	2.30	2.32	2.33	2.35	15
16	2.36	2.37	2.39	2.40	2.41	2.43	2.44	2.46	2.47	2.49	16
17	2.50	2.52	2.53	2.55	2.56	2.58	2.59	2.61	2.62	2.64	17
18	2.66	2.67	2.69	2.70	2.72	2.74	2.75	2.77	2.79	2.80	18
19	2.82	2.84	2.86	2.87	2.89	2.91	2.93	2.94	2.96	2.98	19
20	3.00	3.02	3.03	3.05	3.07	3.09	3.11	3.13	3.15	3.16	20
21	3.18	3.20	3.22	3.24	3.26	3.28	3.30	3.32	3.34	3.36	21
22	3.38	3.40	3.42	3.44	3.46	3.48	3.50	3.52	3.55	3.57	22
23	3.59	3.61	3.63	3.65	3.67	3.70	3.72	3.74	3.76	3.78	23
24	3.80	3.83	3.85	3.87	3.89	3.92	3.94	3.96	3.99	4.01	24
25	4.03	4.05	4.08	4.10	4.12	4.15	4.17	4.20	4.22	4.24	25
26	4.27	4.29	4.32	4.34	4.36	4.39	4.41	4.44	4.46	4.49	26
27	4.51	4.54	4.56	4.59	4.61	4.64	4.66	4.69	4.72	4.74	27
28	4.77	4.79	4.82	4.85	4.87	4.90	4.92	4.95	4.98	5.00	28
29	5.03	5.06	5.09	5.11	5.14	5.17	5.19	5.22	5.25	5.28	29
30	5.30	5.33	5.36	5.39	5.42	5.44	5.47	5.50	5.53	5.56	30
31	5.59	5.61	5.64	5.67	5.70	5.73	5.76	5.79	5.82	5.85	31
32	5.88	5.90	5.93	5.96	5.99	6.02	6.05	6.08	6.11	6.14	32
33	6.17	6.20	6.23	6.26	6.30	6.33	6.36	6.39	6.42	6.45	33
34	6.48	6.51	6.54	6.57	6.61	6.64	6.67	6.70	6.73	6.76	34
35	6.79	6.83	6.86	6.89	6.92	6.96	6.99	7.02	7.05	7.09	35
36	7.12	7.15	7.18	7.22	7.25	7.28	7.32	7.35	7.38	7.42	36
37	7.45	7.48	7.52	7.55	7.58	7.62	7.65	7.68	7.72	7.75	37
38	7.79	7.82	7.86	7.89	7.92	7.96	7.99	8.03	8.06	8.10	38
39	8.13	8.17	8.20	8.24	8.27	8.31	8.35	8.38	8.42	8.45	39
40	8.49	8.52	8.56	8.60	8.63	8.67	8.70	8.74	8.78	8.81	40

**TABLE 1D/1-5**  
**NOMINAL CAPACITIES 1.5 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$ .

TEMPERATURE OF WATER $t^{\circ}\text{C}$	NOMINAL CAPACITY, cm <sup>3</sup>					TEMPERATURE OF WATER $t^{\circ}\text{C}$
	1	2	3	4	5	
5	0.001 7	0.003 4	0.005 2	0.006 9	0.008 6	5
6	0.001 7	0.003 4	0.005 2	0.006 9	0.008 6	6
7	0.001 7	0.003 5	0.005 2	0.006 9	0.008 6	7
8	0.001 7	0.003 5	0.005 2	0.007 0	0.008 7	8
9	0.001 8	0.003 6	0.005 4	0.007 1	0.008 9	9
10	0.001 8	0.003 7	0.005 5	0.007 3	0.009 2	10
11	0.001 9	0.003 8	0.005 7	0.007 6	0.009 5	11
12	0.002 0	0.004 0	0.005 9	0.007 9	0.009 9	12
13	0.002 1	0.004 1	0.006 2	0.008 3	0.010 3	13
14	0.002 2	0.004 3	0.006 5	0.008 7	0.010 9	14
15	0.002 3	0.004 6	0.006 9	0.009 1	0.011 4	15
16	0.002 4	0.004 8	0.007 2	0.009 7	0.012 1	16
17	0.002 6	0.005 1	0.007 7	0.010 2	0.012 8	17
18	0.002 7	0.005 4	0.008 1	0.010 8	0.013 5	18
19	0.002 9	0.005 7	0.008 6	0.011 4	0.014 3	19
20	0.003 0	0.006 1	0.009 1	0.012 1	0.015 2	20
21	0.003 2	0.006 4	0.009 6	0.012 9	0.016 1	21
22	0.003 4	0.006 8	0.010 2	0.013 6	0.017 0	22
23	0.003 6	0.007 2	0.010 8	0.014 4	0.018 0	23
24	0.003 8	0.007 6	0.011 5	0.015 3	0.019 1	24
25	0.004 0	0.008 1	0.012 1	0.016 2	0.020 2	25
26	0.004 3	0.008 5	0.012 8	0.017 1	0.021 4	26
27	0.004 5	0.009 0	0.013 5	0.018 1	0.022 6	27
28	0.004 8	0.009 5	0.014 3	0.019 1	0.023 8	28
29	0.005 0	0.010 0	0.015 1	0.020 1	0.025 1	29
30	0.005 3	0.010 6	0.015 9	0.021 2	0.026 4	30
31	0.005 6	0.011 1	0.016 7	0.022 3	0.027 8	31
32	0.005 9	0.011 7	0.017 6	0.023 4	0.029 3	32
33	0.006 1	0.012 3	0.018 4	0.024 6	0.030 7	33
34	0.006 4	0.012 9	0.019 3	0.025 8	0.032 2	34
35	0.006 8	0.013 5	0.020 3	0.027 0	0.033 8	35
36	0.007 1	0.014 1	0.021 2	0.028 3	0.035 4	36
37	0.007 4	0.014 8	0.022 2	0.029 6	0.037 0	37
38	0.007 7	0.015 5	0.023 2	0.030 9	0.038 7	38
39	0.008 1	0.016 1	0.024 2	0.032 3	0.040 4	39
40	0.008 4	0.016 8	0.025 3	0.033 7	0.042 1	40



TABLE 1D/6

NOMINAL CAPACITY 6 cm<sup>3</sup>(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$  (in conjunction with Table 2/6).

## TEMPERATURE OF WATER

$t^{\circ}\text{C}$	0.0	0.5
5	0.010	0.010
6	0.010	0.010
7	0.010	0.010
8	0.010	0.011
9	0.011	0.011
10	0.011	0.011
11	0.011	0.012
12	0.012	0.012
13	0.012	0.013
14	0.013	0.013
15	0.014	0.014
16	0.014	0.015
17	0.015	0.016
18	0.016	0.017
19	0.017	0.018
20	0.018	0.019
21	0.019	0.020
22	0.020	0.021
23	0.022	0.022
24	0.023	0.024
25	0.024	0.025
26	0.026	0.026
27	0.027	0.028
28	0.029	0.029
29	0.030	0.031
30	0.032	0.033
31	0.033	0.034
32	0.035	0.036
33	0.037	0.038
34	0.039	0.040
35	0.041	0.041
36	0.042	0.043
37	0.044	0.045
38	0.046	0.047
39	0.048	0.049
40	0.051	0.052

TABLE 1D/7

NOMINAL CAPACITY 7 cm<sup>3</sup>(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$  (in conjunction with Table 2/7).

## TEMPERATURE OF WATER

$t^{\circ}\text{C}$	0.0	0.5
5	0.012	0.012
6	0.012	0.012
7	0.012	0.012
8	0.012	0.012
9	0.013	0.013
10	0.013	0.013
11	0.013	0.014
12	0.014	0.014
13	0.014	0.015
14	0.015	0.016
15	0.016	0.016
16	0.017	0.017
17	0.018	0.018
18	0.019	0.019
19	0.020	0.021
20	0.021	0.022
21	0.022	0.023
22	0.024	0.025
23	0.025	0.026
24	0.027	0.028
25	0.028	0.029
26	0.030	0.031
27	0.032	0.032
28	0.033	0.034
29	0.035	0.036
30	0.037	0.038
31	0.039	0.040
32	0.041	0.042
33	0.043	0.044
34	0.045	0.046
35	0.047	0.048
36	0.050	0.051
37	0.052	0.053
38	0.054	0.055
39	0.057	0.058
40	0.059	0.060

**TABLE 1D/8**  
**NOMINAL CAPACITY 8 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )

Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$  (in conjunction with Table 2/8).

TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5
5	0.014	0.014
6	0.014	0.014
7	0.014	0.014
8	0.014	0.014
9	0.014	0.014
10	0.015	0.015
11	0.015	0.016
12	0.016	0.016
13	0.017	0.017
14	0.017	0.018
15	0.018	0.019
16	0.019	0.020
17	0.020	0.021
18	0.022	0.022
19	0.023	0.024
20	0.024	0.025
21	0.026	0.026
22	0.027	0.028
23	0.029	0.030
24	0.031	0.031
25	0.032	0.033
26	0.034	0.035
27	0.036	0.037
28	0.038	0.039
29	0.040	0.041
30	0.042	0.043
31	0.045	0.046
32	0.047	0.048
33	0.049	0.050
34	0.052	0.053
35	0.054	0.055
36	0.057	0.058
37	0.059	0.061
38	0.062	0.063
39	0.065	0.066
40	0.067	0.069

**TABLE 1D/9**  
**NOMINAL CAPACITY 9 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )

Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$  (in conjunction with Table 2/9).

TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5
5	0.016	0.015
6	0.015	0.015
7	0.016	0.016
8	0.016	0.016
9	0.016	0.016
10	0.017	0.017
11	0.017	0.017
12	0.018	0.018
13	0.019	0.019
14	0.020	0.020
15	0.021	0.021
16	0.022	0.022
17	0.023	0.024
18	0.024	0.025
19	0.026	0.027
20	0.027	0.028
21	0.029	0.030
22	0.031	0.032
23	0.032	0.033
24	0.034	0.035
25	0.036	0.037
26	0.038	0.040
27	0.041	0.042
28	0.043	0.044
29	0.045	0.046
30	0.048	0.049
31	0.050	0.051
32	0.053	0.054
33	0.055	0.057
34	0.058	0.059
35	0.061	0.062
36	0.064	0.065
37	0.067	0.068
38	0.070	0.071
39	0.073	0.074
40	0.076	0.077

TABLE 1D/10

NOMINAL CAPACITY 10 cm<sup>3</sup>(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$  (in conjunction with Table 2/10).

## TEMPERATURE OF WATER

$t^{\circ}\text{C}$	0.0	0.5
5	0.017	0.017
6	0.017	0.017
7	0.017	0.017
8	0.017	0.018
9	0.018	0.018
10	0.018	0.019
11	0.019	0.019
12	0.020	0.020
13	0.021	0.021
14	0.022	0.022
15	0.023	0.023
16	0.024	0.025
17	0.026	0.026
18	0.027	0.028
19	0.029	0.029
20	0.030	0.031
21	0.032	0.033
22	0.034	0.035
23	0.036	0.037
24	0.038	0.039
25	0.040	0.042
26	0.043	0.044
27	0.045	0.046
28	0.048	0.049
29	0.050	0.052
30	0.053	0.054
31	0.056	0.057
32	0.059	0.060
33	0.061	0.063
34	0.064	0.066
35	0.068	0.069
36	0.071	0.072
37	0.074	0.076
38	0.077	0.079
39	0.081	0.082
40	0.084	0.086

TABLE 1D/11

NOMINAL CAPACITY 11 cm<sup>3</sup>(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$  (in conjunction with Table 2/11).

## TEMPERATURE OF WATER

$t^{\circ}\text{C}$	0.0	0.5
5	0.019	0.019
6	0.019	0.019
7	0.019	0.019
8	0.019	0.019
9	0.020	0.020
10	0.020	0.021
11	0.021	0.021
12	0.022	0.022
13	0.023	0.023
14	0.024	0.025
15	0.025	0.026
16	0.027	0.027
17	0.028	0.029
18	0.030	0.031
19	0.031	0.032
20	0.033	0.034
21	0.035	0.036
22	0.037	0.039
23	0.040	0.041
24	0.042	0.043
25	0.044	0.046
26	0.047	0.048
27	0.050	0.051
28	0.052	0.054
29	0.055	0.057
30	0.058	0.060
31	0.061	0.063
32	0.064	0.066
33	0.068	0.069
34	0.071	0.073
35	0.074	0.076
36	0.078	0.080
37	0.081	0.083
38	0.085	0.087
39	0.089	0.091
40	0.093	0.095

**TABLE 1D/15**  
**NOMINAL CAPACITY 15 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )

Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/15).

TEMPERATURE OF WATER		
$t^{\circ}\text{C}$	0.0	0.5
5	0.026	0.026
6	0.026	0.026
7	0.026	0.026
8	0.026	0.026
9	0.027	0.027
10	0.028	0.028
11	0.029	0.029
12	0.030	0.030
13	0.031	0.032
14	0.033	0.033
15	0.034	0.035
16	0.036	0.037
17	0.038	0.039
18	0.041	0.042
19	0.043	0.044
20	0.045	0.047
21	0.048	0.050
22	0.051	0.053
23	0.054	0.056
24	0.057	0.059
25	0.061	0.062
26	0.064	0.066
27	0.068	0.070
28	0.071	0.073
29	0.075	0.077
30	0.079	0.081
31	0.083	0.086
32	0.088	0.090
33	0.092	0.094
34	0.097	0.099
35	0.101	0.104
36	0.106	0.109
37	0.111	0.113
38	0.116	0.119
39	0.121	0.124
40	0.126	0.129

**TABLE 1D/20**  
**NOMINAL CAPACITY 20 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/20).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	5
6	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	6
7	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	7
8	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.036	8
9	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.037	0.037	9
10	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.038	0.038	0.038	10
11	0.038	0.038	0.038	0.038	0.039	0.039	0.039	0.039	0.039	0.039	11
12	0.040	0.040	0.040	0.040	0.040	0.040	0.041	0.041	0.041	0.041	12
13	0.041	0.042	0.042	0.042	0.042	0.042	0.043	0.043	0.043	0.043	13
14	0.043	0.044	0.044	0.044	0.044	0.045	0.045	0.045	0.045	0.046	14
15	0.046	0.046	0.046	0.046	0.047	0.047	0.047	0.047	0.048	0.048	15
16	0.048	0.049	0.049	0.049	0.049	0.050	0.050	0.050	0.050	0.051	16
17	0.051	0.051	0.052	0.052	0.052	0.052	0.053	0.053	0.053	0.054	17
18	0.054	0.054	0.055	0.055	0.055	0.056	0.056	0.056	0.057	0.057	18
19	0.057	0.058	0.058	0.058	0.059	0.059	0.059	0.060	0.060	0.060	19
20	0.061	0.061	0.061	0.062	0.062	0.062	0.063	0.063	0.064	0.064	20
21	0.064	0.065	0.065	0.065	0.066	0.066	0.067	0.067	0.067	0.068	21
22	0.068	0.069	0.069	0.069	0.070	0.070	0.071	0.071	0.071	0.072	22
23	0.072	0.073	0.073	0.073	0.074	0.074	0.075	0.075	0.076	0.076	23
24	0.076	0.077	0.077	0.078	0.078	0.079	0.079	0.079	0.080	0.080	24
25	0.081	0.081	0.082	0.082	0.083	0.083	0.084	0.084	0.085	0.085	25
26	0.085	0.086	0.086	0.087	0.087	0.088	0.088	0.089	0.089	0.090	26
27	0.090	0.091	0.091	0.092	0.092	0.093	0.093	0.094	0.094	0.095	27
28	0.095	0.096	0.096	0.097	0.097	0.098	0.098	0.099	0.099	0.100	28
29	0.100	0.101	0.101	0.102	0.103	0.103	0.104	0.104	0.105	0.105	29
30	0.106	0.106	0.107	0.107	0.108	0.109	0.109	0.110	0.110	0.111	30
31	0.111	0.112	0.112	0.113	0.114	0.114	0.115	0.115	0.116	0.116	31
32	0.117	0.118	0.118	0.119	0.119	0.120	0.121	0.121	0.122	0.122	32
33	0.123	0.123	0.124	0.125	0.125	0.126	0.126	0.127	0.128	0.128	33
34	0.129	0.130	0.130	0.131	0.131	0.132	0.133	0.133	0.134	0.134	34
35	0.135	0.136	0.136	0.137	0.138	0.138	0.139	0.140	0.140	0.141	35
36	0.141	0.142	0.143	0.143	0.144	0.145	0.145	0.146	0.147	0.147	36
37	0.148	0.149	0.149	0.150	0.151	0.151	0.152	0.153	0.153	0.154	37
38	0.155	0.155	0.156	0.157	0.157	0.158	0.159	0.159	0.160	0.161	38
39	0.161	0.162	0.163	0.164	0.164	0.165	0.166	0.166	0.167	0.168	39
40	0.168	0.169	0.170	0.171	0.171	0.172	0.173	0.173	0.174	0.175	40

**TABLE 1D/25**  
**NOMINAL CAPACITY 25 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/25).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	5
6	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	6
7	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.044	0.044	0.044	7
8	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.045	8
9	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.046	0.046	0.046	9
10	0.046	0.046	0.046	0.046	0.047	0.047	0.047	0.047	0.047	0.047	10
11	0.048	0.048	0.048	0.048	0.048	0.048	0.049	0.049	0.049	0.049	11
12	0.049	0.050	0.050	0.050	0.050	0.051	0.051	0.051	0.051	0.052	12
13	0.052	0.052	0.052	0.052	0.053	0.053	0.053	0.054	0.054	0.054	13
14	0.054	0.055	0.055	0.055	0.055	0.056	0.056	0.056	0.057	0.057	14
15	0.057	0.057	0.058	0.058	0.058	0.059	0.059	0.059	0.060	0.060	15
16	0.060	0.061	0.061	0.061	0.062	0.062	0.062	0.063	0.063	0.063	16
17	0.064	0.064	0.065	0.065	0.065	0.066	0.066	0.066	0.067	0.067	17
18	0.068	0.068	0.068	0.069	0.069	0.069	0.070	0.070	0.071	0.071	18
19	0.072	0.072	0.072	0.073	0.073	0.074	0.074	0.074	0.075	0.075	19
20	0.076	0.076	0.077	0.077	0.078	0.078	0.078	0.079	0.079	0.080	20
21	0.080	0.081	0.081	0.082	0.082	0.083	0.083	0.084	0.084	0.085	21
22	0.085	0.086	0.086	0.087	0.087	0.088	0.088	0.089	0.089	0.090	22
23	0.090	0.091	0.091	0.092	0.092	0.093	0.093	0.094	0.094	0.095	23
24	0.095	0.096	0.097	0.097	0.098	0.098	0.099	0.099	0.100	0.100	24
25	0.101	0.102	0.102	0.103	0.103	0.104	0.104	0.105	0.106	0.106	25
26	0.107	0.107	0.108	0.109	0.109	0.110	0.110	0.111	0.112	0.112	26
27	0.113	0.113	0.114	0.115	0.115	0.116	0.117	0.117	0.118	0.118	27
28	0.119	0.120	0.120	0.121	0.122	0.122	0.123	0.124	0.124	0.125	28
29	0.126	0.126	0.127	0.128	0.128	0.129	0.130	0.130	0.131	0.132	29
30	0.132	0.133	0.134	0.134	0.135	0.136	0.136	0.137	0.138	0.138	30
31	0.139	0.140	0.141	0.141	0.142	0.143	0.143	0.144	0.145	0.146	31
32	0.146	0.147	0.148	0.148	0.149	0.150	0.151	0.151	0.152	0.153	32
33	0.154	0.154	0.155	0.156	0.157	0.157	0.158	0.159	0.160	0.160	33
34	0.161	0.162	0.163	0.163	0.164	0.165	0.166	0.167	0.167	0.168	34
35	0.169	0.170	0.170	0.171	0.172	0.173	0.174	0.174	0.175	0.176	35
36	0.177	0.178	0.178	0.179	0.180	0.181	0.182	0.183	0.183	0.184	36
37	0.185	0.186	0.187	0.187	0.188	0.189	0.190	0.191	0.192	0.192	37
38	0.193	0.194	0.195	0.196	0.197	0.198	0.198	0.199	0.200	0.201	38
39	0.202	0.203	0.204	0.204	0.205	0.206	0.207	0.208	0.209	0.210	39
40	0.211	0.211	0.212	0.213	0.214	0.215	0.216	0.217	0.218	0.219	40

**TABLE 1D/30**  
**NOMINAL CAPACITY 30 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/30).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	5
6	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	6
7	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	7
8	0.052	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	8
9	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.055	0.055	0.055	9
10	0.055	0.055	0.055	0.056	0.056	0.056	0.056	0.056	0.057	0.057	10
11	0.057	0.057	0.057	0.058	0.058	0.058	0.058	0.059	0.059	0.059	11
12	0.059	0.060	0.060	0.060	0.060	0.061	0.061	0.061	0.062	0.062	12
13	0.062	0.062	0.063	0.063	0.063	0.064	0.064	0.064	0.065	0.065	13
14	0.065	0.065	0.066	0.066	0.067	0.067	0.067	0.068	0.068	0.068	14
15	0.069	0.069	0.069	0.070	0.070	0.070	0.071	0.071	0.072	0.072	15
16	0.072	0.073	0.073	0.074	0.074	0.074	0.075	0.075	0.076	0.076	16
17	0.077	0.077	0.077	0.078	0.078	0.079	0.079	0.080	0.080	0.081	17
18	0.081	0.081	0.082	0.082	0.083	0.083	0.084	0.084	0.085	0.085	18
19	0.086	0.086	0.087	0.087	0.088	0.088	0.089	0.089	0.090	0.090	19
20	0.091	0.091	0.092	0.093	0.093	0.094	0.094	0.095	0.095	0.096	20
21	0.096	0.097	0.098	0.098	0.099	0.099	0.100	0.100	0.101	0.102	21
22	0.102	0.103	0.103	0.104	0.105	0.105	0.106	0.106	0.107	0.108	22
23	0.108	0.109	0.109	0.110	0.111	0.111	0.112	0.113	0.113	0.114	23
24	0.115	0.115	0.116	0.117	0.117	0.118	0.119	0.119	0.120	0.121	24
25	0.121	0.122	0.123	0.123	0.124	0.125	0.125	0.126	0.127	0.127	25
26	0.128	0.129	0.130	0.130	0.131	0.132	0.132	0.133	0.134	0.135	26
27	0.135	0.136	0.137	0.138	0.138	0.139	0.140	0.141	0.141	0.142	27
28	0.143	0.144	0.144	0.145	0.146	0.147	0.148	0.148	0.149	0.150	28
29	0.151	0.151	0.152	0.153	0.154	0.155	0.155	0.156	0.157	0.158	29
30	0.159	0.159	0.160	0.161	0.162	0.163	0.164	0.164	0.165	0.166	30
31	0.167	0.168	0.169	0.169	0.170	0.171	0.172	0.173	0.174	0.175	31
32	0.176	0.176	0.177	0.178	0.179	0.180	0.181	0.182	0.183	0.183	32
33	0.184	0.185	0.186	0.187	0.188	0.189	0.190	0.191	0.192	0.192	33
34	0.193	0.194	0.195	0.196	0.197	0.198	0.199	0.200	0.201	0.202	34
35	0.203	0.204	0.205	0.205	0.206	0.207	0.208	0.209	0.210	0.211	35
36	0.212	0.213	0.214	0.215	0.216	0.217	0.218	0.219	0.220	0.221	36
37	0.222	0.223	0.224	0.225	0.226	0.227	0.228	0.229	0.230	0.231	37
38	0.232	0.233	0.234	0.235	0.236	0.237	0.238	0.239	0.240	0.241	38
39	0.242	0.243	0.244	0.245	0.246	0.247	0.248	0.250	0.251	0.252	39
40	0.253	0.254	0.255	0.256	0.257	0.258	0.259	0.260	0.261	0.262	40

TABLE 1D/40

NOMINAL CAPACITY 40 cm<sup>3</sup>(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
(in conjunction with Table 2/40).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	5
6	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	6
7	0.069	0.069	0.069	0.069	0.069	0.069	0.070	0.070	0.070	0.070	7
8	0.070	0.070	0.070	0.070	0.070	0.071	0.071	0.071	0.071	0.071	8
9	0.071	0.072	0.072	0.072	0.072	0.072	0.073	0.073	0.073	0.073	9
10	0.073	0.074	0.074	0.074	0.074	0.075	0.075	0.075	0.076	0.076	10
11	0.076	0.076	0.077	0.077	0.077	0.078	0.078	0.078	0.079	0.079	11
12	0.079	0.080	0.080	0.080	0.081	0.081	0.081	0.082	0.082	0.082	12
13	0.083	0.083	0.084	0.084	0.084	0.085	0.085	0.086	0.086	0.086	13
14	0.087	0.087	0.088	0.088	0.089	0.089	0.090	0.090	0.091	0.091	14
15	0.091	0.092	0.092	0.093	0.093	0.094	0.094	0.095	0.095	0.096	15
16	0.097	0.097	0.098	0.098	0.099	0.099	0.100	0.100	0.101	0.101	16
17	0.102	0.103	0.103	0.104	0.104	0.105	0.106	0.106	0.107	0.107	17
18	0.108	0.109	0.109	0.110	0.111	0.111	0.112	0.112	0.113	0.114	18
19	0.114	0.115	0.116	0.116	0.117	0.118	0.119	0.119	0.120	0.121	19
20	0.121	0.122	0.123	0.123	0.124	0.125	0.126	0.126	0.127	0.128	20
21	0.129	0.129	0.130	0.131	0.132	0.132	0.133	0.134	0.135	0.135	21
22	0.136	0.137	0.138	0.139	0.139	0.140	0.141	0.142	0.143	0.143	22
23	0.144	0.145	0.146	0.147	0.148	0.148	0.149	0.150	0.151	0.152	23
24	0.153	0.154	0.155	0.155	0.156	0.157	0.158	0.159	0.160	0.161	24
25	0.162	0.163	0.163	0.164	0.165	0.166	0.167	0.168	0.169	0.170	25
26	0.171	0.172	0.173	0.174	0.175	0.176	0.177	0.178	0.179	0.180	26
27	0.181	0.182	0.182	0.183	0.184	0.185	0.186	0.187	0.188	0.189	27
28	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.199	0.200	28
29	0.201	0.202	0.203	0.204	0.205	0.206	0.207	0.208	0.209	0.210	29
30	0.212	0.213	0.214	0.215	0.216	0.217	0.218	0.219	0.220	0.221	30
31	0.223	0.224	0.225	0.226	0.227	0.228	0.229	0.231	0.232	0.233	31
32	0.234	0.235	0.236	0.237	0.239	0.240	0.241	0.242	0.243	0.245	32
33	0.246	0.247	0.248	0.249	0.251	0.252	0.253	0.254	0.255	0.257	33
34	0.258	0.259	0.260	0.261	0.263	0.264	0.265	0.266	0.268	0.269	34
35	0.270	0.271	0.273	0.274	0.275	0.277	0.278	0.279	0.280	0.282	35
36	0.283	0.284	0.286	0.287	0.288	0.289	0.291	0.292	0.293	0.295	36
37	0.296	0.297	0.299	0.300	0.301	0.303	0.304	0.305	0.307	0.308	37
38	0.309	0.311	0.312	0.313	0.315	0.316	0.317	0.319	0.320	0.322	38
39	0.323	0.324	0.326	0.327	0.329	0.330	0.331	0.333	0.334	0.336	39
40	0.337	0.338	0.340	0.341	0.343	0.344	0.345	0.347	0.348	0.350	40



**TABLE 1D/50**  
**NOMINAL CAPACITY 50 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/50).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	5
6	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	6
7	0.086	0.086	0.086	0.087	0.087	0.087	0.087	0.087	0.087	0.087	7
8	0.087	0.088	0.088	0.088	0.088	0.088	0.088	0.089	0.089	0.089	8
9	0.089	0.090	0.090	0.090	0.090	0.091	0.091	0.091	0.091	0.092	9
10	0.092	0.092	0.092	0.093	0.093	0.093	0.094	0.094	0.094	0.095	10
11	0.095	0.095	0.096	0.096	0.097	0.097	0.097	0.098	0.098	0.099	11
12	0.099	0.099	0.100	0.100	0.101	0.101	0.102	0.102	0.103	0.103	12
13	0.103	0.104	0.104	0.105	0.105	0.106	0.106	0.107	0.108	0.108	13
14	0.109	0.109	0.110	0.110	0.111	0.111	0.112	0.113	0.113	0.114	14
15	0.114	0.115	0.116	0.116	0.117	0.117	0.118	0.119	0.119	0.120	15
16	0.121	0.121	0.122	0.123	0.123	0.124	0.125	0.125	0.126	0.127	16
17	0.128	0.128	0.129	0.130	0.131	0.131	0.132	0.133	0.134	0.134	17
18	0.135	0.136	0.137	0.137	0.138	0.139	0.140	0.141	0.141	0.142	18
19	0.143	0.144	0.145	0.146	0.146	0.147	0.148	0.149	0.150	0.151	19
20	0.152	0.152	0.153	0.154	0.155	0.156	0.157	0.158	0.159	0.160	20
21	0.161	0.162	0.163	0.164	0.164	0.165	0.166	0.167	0.168	0.169	21
22	0.170	0.171	0.172	0.173	0.174	0.175	0.176	0.177	0.178	0.179	22
23	0.180	0.181	0.182	0.184	0.185	0.186	0.187	0.188	0.189	0.190	23
24	0.191	0.192	0.193	0.194	0.195	0.196	0.198	0.199	0.200	0.201	24
25	0.202	0.203	0.204	0.205	0.207	0.208	0.209	0.210	0.211	0.212	25
26	0.214	0.215	0.216	0.217	0.218	0.220	0.221	0.222	0.223	0.224	26
27	0.226	0.227	0.228	0.229	0.231	0.232	0.233	0.234	0.236	0.237	27
28	0.238	0.239	0.241	0.242	0.243	0.245	0.246	0.247	0.248	0.250	28
29	0.251	0.252	0.254	0.255	0.256	0.258	0.259	0.260	0.262	0.263	29
30	0.264	0.266	0.267	0.269	0.270	0.271	0.273	0.274	0.275	0.277	30
31	0.278	0.280	0.281	0.282	0.284	0.285	0.287	0.288	0.290	0.291	31
32	0.293	0.294	0.295	0.297	0.298	0.300	0.301	0.303	0.304	0.306	32
33	0.307	0.309	0.310	0.312	0.313	0.315	0.316	0.318	0.319	0.321	33
34	0.322	0.324	0.325	0.327	0.328	0.330	0.332	0.333	0.335	0.336	34
35	0.338	0.339	0.341	0.342	0.344	0.346	0.347	0.349	0.350	0.352	35
36	0.354	0.355	0.357	0.359	0.360	0.362	0.363	0.365	0.367	0.368	36
37	0.370	0.372	0.373	0.375	0.377	0.378	0.380	0.382	0.383	0.385	37
38	0.387	0.388	0.390	0.392	0.393	0.395	0.397	0.399	0.400	0.402	38
39	0.404	0.405	0.407	0.409	0.411	0.412	0.414	0.416	0.418	0.419	39
40	0.421	0.423	0.425	0.426	0.428	0.430	0.432	0.434	0.435	0.437	40

**TABLE 1D/60**  
**NOMINAL CAPACITY 60 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/60).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	5
6	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	6
7	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.105	0.105	7
8	0.105	0.105	0.105	0.106	0.106	0.106	0.106	0.106	0.107	0.107	8
9	0.107	0.107	0.108	0.108	0.108	0.109	0.109	0.109	0.110	0.110	9
10	0.110	0.111	0.111	0.111	0.112	0.112	0.112	0.113	0.113	0.114	10
11	0.114	0.115	0.115	0.115	0.116	0.116	0.117	0.117	0.118	0.118	11
12	0.119	0.119	0.120	0.120	0.121	0.121	0.122	0.122	0.123	0.124	12
13	0.124	0.125	0.125	0.126	0.127	0.127	0.128	0.128	0.129	0.130	13
14	0.130	0.131	0.132	0.132	0.133	0.134	0.134	0.135	0.136	0.137	14
15	0.137	0.138	0.139	0.139	0.140	0.141	0.142	0.142	0.143	0.144	15
16	0.145	0.146	0.146	0.147	0.148	0.149	0.150	0.151	0.151	0.152	16
17	0.153	0.154	0.155	0.156	0.157	0.157	0.158	0.159	0.160	0.161	17
18	0.162	0.163	0.164	0.165	0.166	0.167	0.168	0.169	0.170	0.171	18
19	0.172	0.173	0.174	0.175	0.176	0.177	0.178	0.179	0.180	0.181	19
20	0.182	0.183	0.184	0.185	0.186	0.187	0.188	0.189	0.191	0.192	20
21	0.193	0.194	0.195	0.196	0.197	0.199	0.200	0.201	0.202	0.203	21
22	0.204	0.206	0.207	0.208	0.209	0.210	0.212	0.213	0.214	0.215	22
23	0.216	0.218	0.219	0.220	0.221	0.223	0.224	0.225	0.227	0.228	23
24	0.229	0.230	0.232	0.233	0.234	0.236	0.237	0.238	0.240	0.241	24
25	0.242	0.244	0.245	0.247	0.248	0.249	0.251	0.252	0.254	0.255	25
26	0.256	0.258	0.259	0.261	0.262	0.263	0.265	0.266	0.268	0.269	26
27	0.271	0.272	0.274	0.275	0.277	0.278	0.280	0.281	0.283	0.284	27
28	0.286	0.287	0.289	0.290	0.292	0.293	0.295	0.297	0.298	0.300	28
29	0.301	0.303	0.304	0.306	0.308	0.309	0.311	0.312	0.314	0.316	29
30	0.317	0.319	0.321	0.322	0.324	0.326	0.327	0.329	0.331	0.332	30
31	0.334	0.336	0.337	0.339	0.341	0.342	0.344	0.346	0.348	0.349	31
32	0.351	0.353	0.354	0.356	0.358	0.360	0.362	0.363	0.365	0.367	32
33	0.369	0.370	0.372	0.374	0.376	0.378	0.379	0.381	0.383	0.385	33
34	0.387	0.389	0.390	0.392	0.394	0.396	0.398	0.400	0.402	0.403	34
35	0.405	0.407	0.409	0.411	0.413	0.415	0.417	0.419	0.421	0.422	35
36	0.424	0.426	0.428	0.430	0.432	0.434	0.436	0.438	0.440	0.442	36
37	0.444	0.446	0.448	0.450	0.452	0.454	0.456	0.458	0.460	0.462	37
38	0.464	0.466	0.468	0.470	0.472	0.474	0.476	0.478	0.480	0.482	38
39	0.484	0.487	0.489	0.491	0.493	0.495	0.497	0.499	0.501	0.503	39
40	0.505	0.508	0.510	0.512	0.514	0.516	0.518	0.520	0.522	0.525	40

TABLE 1D/70

NOMINAL CAPACITY 70 cm<sup>3</sup>(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
(in conjunction with Table 2/70).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.121	0.121	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	5
6	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.121	0.121	0.121	6
7	0.121	0.121	0.121	0.121	0.121	0.121	0.122	0.122	0.122	0.122	7
8	0.122	0.123	0.123	0.123	0.123	0.124	0.124	0.124	0.124	0.125	8
9	0.125	0.125	0.126	0.126	0.126	0.127	0.127	0.127	0.128	0.128	9
10	0.129	0.129	0.129	0.130	0.130	0.131	0.131	0.132	0.132	0.133	10
11	0.133	0.134	0.134	0.135	0.135	0.136	0.136	0.137	0.137	0.138	11
12	0.139	0.139	0.140	0.140	0.141	0.142	0.142	0.143	0.144	0.144	12
13	0.145	0.146	0.146	0.147	0.148	0.148	0.149	0.150	0.151	0.151	13
14	0.152	0.153	0.154	0.154	0.155	0.156	0.157	0.158	0.158	0.159	14
15	0.160	0.161	0.162	0.163	0.164	0.164	0.165	0.166	0.167	0.168	15
16	0.169	0.170	0.171	0.172	0.173	0.174	0.175	0.176	0.177	0.178	16
17	0.179	0.180	0.181	0.182	0.183	0.184	0.185	0.186	0.187	0.188	17
18	0.189	0.190	0.191	0.192	0.193	0.195	0.196	0.197	0.198	0.199	18
19	0.200	0.201	0.203	0.204	0.205	0.206	0.207	0.209	0.210	0.211	19
20	0.212	0.213	0.215	0.216	0.217	0.219	0.220	0.221	0.222	0.224	20
21	0.225	0.226	0.228	0.229	0.230	0.232	0.233	0.234	0.236	0.237	21
22	0.238	0.240	0.241	0.243	0.244	0.245	0.247	0.248	0.250	0.251	22
23	0.253	0.254	0.255	0.257	0.258	0.260	0.261	0.263	0.264	0.266	23
24	0.267	0.269	0.270	0.272	0.273	0.275	0.277	0.278	0.280	0.281	24
25	0.283	0.284	0.286	0.288	0.289	0.291	0.293	0.294	0.296	0.297	25
26	0.299	0.301	0.302	0.304	0.306	0.307	0.309	0.311	0.312	0.314	26
27	0.316	0.318	0.319	0.321	0.323	0.325	0.326	0.328	0.330	0.332	27
28	0.333	0.335	0.337	0.339	0.341	0.342	0.344	0.346	0.348	0.350	28
29	0.351	0.353	0.355	0.357	0.359	0.361	0.363	0.365	0.366	0.368	29
30	0.370	0.372	0.374	0.376	0.378	0.380	0.382	0.384	0.386	0.388	30
31	0.390	0.392	0.394	0.395	0.397	0.399	0.401	0.403	0.405	0.407	31
32	0.410	0.412	0.414	0.416	0.418	0.420	0.422	0.424	0.426	0.428	32
33	0.430	0.432	0.434	0.436	0.438	0.441	0.443	0.445	0.447	0.449	33
34	0.451	0.453	0.455	0.458	0.460	0.462	0.464	0.466	0.468	0.471	34
35	0.473	0.475	0.477	0.479	0.482	0.484	0.486	0.488	0.491	0.493	35
36	0.495	0.497	0.500	0.502	0.504	0.506	0.509	0.511	0.513	0.516	36
37	0.518	0.520	0.523	0.525	0.527	0.530	0.532	0.534	0.537	0.539	37
38	0.541	0.544	0.546	0.548	0.551	0.553	0.556	0.558	0.560	0.563	38
39	0.565	0.568	0.570	0.572	0.575	0.577	0.580	0.582	0.585	0.587	39
40	0.590	0.592	0.595	0.597	0.600	0.602	0.605	0.607	0.610	0.612	40

**TABLE 1D/75**  
**NOMINAL CAPACITY 75 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/75).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129	5
6	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129	6
7	0.129	0.130	0.130	0.130	0.130	0.130	0.130	0.131	0.131	0.131	7
8	0.131	0.131	0.132	0.132	0.132	0.132	0.133	0.133	0.133	0.134	8
9	0.134	0.134	0.135	0.135	0.135	0.136	0.136	0.137	0.137	0.137	9
10	0.138	0.138	0.139	0.139	0.140	0.140	0.141	0.141	0.142	0.142	10
11	0.143	0.143	0.144	0.144	0.145	0.145	0.146	0.147	0.147	0.148	11
12	0.148	0.149	0.150	0.150	0.151	0.152	0.152	0.153	0.154	0.155	12
13	0.155	0.156	0.157	0.157	0.158	0.159	0.160	0.161	0.161	0.162	13
14	0.163	0.164	0.165	0.165	0.166	0.167	0.168	0.169	0.170	0.171	14
15	0.172	0.172	0.173	0.174	0.175	0.176	0.177	0.178	0.179	0.180	15
16	0.181	0.182	0.183	0.184	0.185	0.186	0.187	0.188	0.189	0.190	16
17	0.191	0.192	0.194	0.195	0.196	0.197	0.198	0.199	0.200	0.201	17
18	0.203	0.204	0.205	0.206	0.207	0.208	0.210	0.211	0.212	0.213	18
19	0.215	0.216	0.217	0.218	0.220	0.221	0.222	0.223	0.225	0.226	19
20	0.227	0.229	0.230	0.231	0.233	0.234	0.235	0.237	0.238	0.240	20
21	0.241	0.242	0.244	0.245	0.247	0.248	0.250	0.251	0.252	0.254	21
22	0.255	0.257	0.258	0.260	0.261	0.263	0.264	0.266	0.267	0.269	22
23	0.271	0.272	0.274	0.275	0.277	0.278	0.280	0.282	0.283	0.285	23
24	0.286	0.288	0.290	0.291	0.293	0.295	0.296	0.298	0.300	0.301	24
25	0.303	0.305	0.307	0.308	0.310	0.312	0.313	0.315	0.317	0.319	25
26	0.320	0.322	0.324	0.326	0.328	0.329	0.331	0.333	0.335	0.337	26
27	0.338	0.340	0.342	0.344	0.346	0.348	0.350	0.352	0.353	0.355	27
28	0.357	0.359	0.361	0.363	0.365	0.367	0.369	0.371	0.373	0.375	28
29	0.377	0.379	0.381	0.383	0.385	0.387	0.389	0.391	0.393	0.395	29
30	0.397	0.399	0.401	0.403	0.405	0.407	0.409	0.411	0.413	0.415	30
31	0.417	0.420	0.422	0.424	0.426	0.428	0.430	0.432	0.434	0.437	31
32	0.439	0.441	0.443	0.445	0.447	0.450	0.452	0.454	0.456	0.459	32
33	0.461	0.463	0.465	0.467	0.470	0.472	0.474	0.477	0.479	0.481	33
34	0.483	0.486	0.488	0.490	0.493	0.495	0.497	0.500	0.502	0.504	34
35	0.507	0.509	0.511	0.514	0.516	0.518	0.521	0.523	0.526	0.528	35
36	0.530	0.533	0.535	0.538	0.540	0.543	0.545	0.548	0.550	0.552	36
37	0.555	0.557	0.560	0.562	0.565	0.567	0.570	0.572	0.575	0.577	37
38	0.580	0.582	0.585	0.588	0.590	0.593	0.595	0.598	0.600	0.603	38
39	0.606	0.608	0.611	0.613	0.616	0.619	0.621	0.624	0.626	0.629	39
40	0.632	0.634	0.637	0.640	0.642	0.645	0.648	0.650	0.653	0.656	40

**TABLE 1D/80**  
**NOMINAL CAPACITY 80 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/80).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.138	0.138	0.138	0.138	0.138	0.137	0.137	0.137	0.137	0.137	5
6	0.137	0.137	0.137	0.137	0.138	0.138	0.138	0.138	0.138	0.138	6
7	0.138	0.138	0.138	0.139	0.139	0.139	0.139	0.139	0.139	0.140	7
8	0.140	0.140	0.140	0.141	0.141	0.141	0.142	0.142	0.142	0.143	8
9	0.143	0.143	0.144	0.144	0.144	0.145	0.145	0.146	0.146	0.147	9
10	0.147	0.147	0.148	0.148	0.149	0.149	0.150	0.150	0.151	0.152	10
11	0.152	0.153	0.153	0.154	0.155	0.155	0.156	0.156	0.157	0.158	11
12	0.158	0.159	0.160	0.160	0.161	0.162	0.163	0.163	0.164	0.165	12
13	0.166	0.166	0.167	0.168	0.169	0.170	0.170	0.171	0.172	0.173	13
14	0.174	0.175	0.176	0.176	0.177	0.178	0.179	0.180	0.181	0.182	14
15	0.183	0.184	0.185	0.186	0.187	0.188	0.189	0.190	0.191	0.192	15
16	0.193	0.194	0.195	0.196	0.197	0.198	0.200	0.201	0.202	0.203	16
17	0.204	0.205	0.206	0.208	0.209	0.210	0.211	0.212	0.214	0.215	17
18	0.216	0.217	0.219	0.220	0.221	0.222	0.224	0.225	0.226	0.228	18
19	0.229	0.230	0.232	0.233	0.234	0.236	0.237	0.238	0.240	0.241	19
20	0.243	0.244	0.245	0.247	0.248	0.250	0.251	0.253	0.254	0.256	20
21	0.257	0.259	0.260	0.262	0.263	0.265	0.266	0.268	0.269	0.271	21
22	0.272	0.274	0.276	0.277	0.279	0.280	0.282	0.284	0.285	0.287	22
23	0.289	0.290	0.292	0.294	0.295	0.297	0.299	0.300	0.302	0.304	23
24	0.306	0.307	0.309	0.311	0.313	0.314	0.316	0.318	0.320	0.321	24
25	0.323	0.325	0.327	0.329	0.331	0.332	0.334	0.336	0.338	0.340	25
26	0.342	0.344	0.346	0.347	0.349	0.351	0.353	0.355	0.357	0.359	26
27	0.361	0.363	0.365	0.367	0.369	0.371	0.373	0.375	0.377	0.379	27
28	0.381	0.383	0.385	0.387	0.389	0.391	0.393	0.395	0.398	0.400	28
29	0.402	0.404	0.406	0.408	0.410	0.412	0.414	0.417	0.419	0.421	29
30	0.423	0.425	0.427	0.430	0.432	0.434	0.436	0.439	0.441	0.443	30
31	0.445	0.447	0.450	0.452	0.454	0.457	0.459	0.461	0.463	0.466	31
32	0.468	0.470	0.473	0.475	0.477	0.480	0.482	0.484	0.487	0.489	32
33	0.491	0.494	0.496	0.499	0.501	0.503	0.506	0.508	0.511	0.513	33
34	0.516	0.518	0.521	0.523	0.525	0.528	0.530	0.533	0.535	0.538	34
35	0.540	0.543	0.545	0.548	0.551	0.553	0.556	0.558	0.561	0.563	35
36	0.566	0.568	0.571	0.574	0.576	0.579	0.581	0.584	0.587	0.589	36
37	0.592	0.595	0.597	0.600	0.603	0.605	0.608	0.611	0.613	0.616	37
38	0.619	0.621	0.624	0.627	0.629	0.632	0.635	0.638	0.640	0.643	38
39	0.646	0.649	0.651	0.654	0.657	0.660	0.663	0.665	0.668	0.671	39
40	0.674	0.677	0.680	0.682	0.685	0.688	0.691	0.694	0.697	0.700	40

**TABLE 1D/90**  
**NOMINAL CAPACITY 90 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/90).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	5
6	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	6
7	0.155	0.155	0.156	0.156	0.156	0.156	0.156	0.157	0.157	0.157	7
8	0.157	0.158	0.158	0.158	0.159	0.159	0.159	0.160	0.160	0.160	8
9	0.161	0.161	0.162	0.162	0.162	0.163	0.163	0.164	0.164	0.165	9
10	0.165	0.166	0.166	0.167	0.168	0.168	0.169	0.169	0.170	0.171	10
11	0.171	0.172	0.172	0.173	0.174	0.175	0.175	0.176	0.177	0.177	11
12	0.178	0.179	0.180	0.180	0.181	0.182	0.183	0.184	0.185	0.185	12
13	0.186	0.187	0.188	0.189	0.190	0.191	0.192	0.193	0.194	0.195	13
14	0.196	0.196	0.197	0.199	0.200	0.201	0.202	0.203	0.204	0.205	14
15	0.206	0.207	0.208	0.209	0.210	0.211	0.213	0.214	0.215	0.216	15
16	0.217	0.218	0.220	0.221	0.222	0.223	0.225	0.226	0.227	0.228	16
17	0.230	0.231	0.232	0.234	0.235	0.236	0.238	0.239	0.240	0.242	17
18	0.243	0.244	0.246	0.247	0.249	0.250	0.252	0.253	0.255	0.256	18
19	0.257	0.259	0.261	0.262	0.264	0.265	0.267	0.268	0.270	0.271	19
20	0.273	0.274	0.276	0.278	0.279	0.281	0.283	0.284	0.286	0.288	20
21	0.289	0.291	0.293	0.294	0.296	0.298	0.299	0.301	0.303	0.305	21
22	0.307	0.308	0.310	0.312	0.314	0.315	0.317	0.319	0.321	0.323	22
23	0.325	0.327	0.328	0.330	0.332	0.334	0.336	0.338	0.340	0.342	23
24	0.344	0.346	0.348	0.350	0.352	0.354	0.356	0.358	0.360	0.362	24
25	0.364	0.366	0.368	0.370	0.372	0.374	0.376	0.378	0.380	0.382	25
26	0.385	0.387	0.389	0.391	0.393	0.395	0.397	0.400	0.402	0.404	26
27	0.406	0.408	0.411	0.413	0.415	0.417	0.420	0.422	0.424	0.426	27
28	0.429	0.431	0.433	0.436	0.438	0.440	0.443	0.445	0.447	0.450	28
29	0.452	0.454	0.457	0.459	0.461	0.464	0.466	0.469	0.471	0.474	29
30	0.476	0.478	0.481	0.483	0.486	0.488	0.491	0.493	0.496	0.498	30
31	0.501	0.503	0.506	0.508	0.511	0.514	0.516	0.519	0.521	0.524	31
32	0.527	0.529	0.532	0.534	0.537	0.540	0.542	0.545	0.548	0.550	32
33	0.553	0.556	0.558	0.561	0.564	0.566	0.569	0.572	0.575	0.577	33
34	0.580	0.583	0.586	0.588	0.591	0.594	0.597	0.600	0.602	0.605	34
35	0.608	0.611	0.614	0.616	0.619	0.622	0.625	0.628	0.631	0.634	35
36	0.637	0.639	0.642	0.645	0.648	0.651	0.654	0.657	0.660	0.663	36
37	0.666	0.669	0.672	0.675	0.678	0.681	0.684	0.687	0.690	0.693	37
38	0.696	0.699	0.702	0.705	0.708	0.711	0.714	0.717	0.720	0.724	38
39	0.727	0.730	0.733	0.736	0.739	0.742	0.745	0.749	0.752	0.755	39
40	0.758	0.761	0.764	0.768	0.771	0.774	0.777	0.780	0.784	0.787	40

TABLE 1D/100

NOMINAL CAPACITY 100 cm<sup>3</sup>(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-4}/^{\circ}\text{C}$ )Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
(in conjunction with Table 2/100).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.172	0.172	0.172	0.172	0.172	0.172	0.172	0.172	0.172	0.172	5
6	0.172	0.172	0.172	0.172	0.172	0.172	0.172	0.172	0.172	0.172	6
7	0.173	0.173	0.173	0.173	0.173	0.174	0.174	0.174	0.174	0.175	7
8	0.175	0.175	0.176	0.176	0.176	0.177	0.177	0.177	0.178	0.178	8
9	0.179	0.179	0.180	0.180	0.181	0.181	0.182	0.182	0.183	0.183	9
10	0.184	0.184	0.185	0.186	0.186	0.187	0.187	0.188	0.189	0.189	10
11	0.190	0.191	0.192	0.192	0.193	0.194	0.195	0.195	0.196	0.197	11
12	0.198	0.199	0.200	0.201	0.201	0.202	0.203	0.204	0.205	0.206	12
13	0.207	0.208	0.209	0.210	0.211	0.212	0.213	0.214	0.215	0.216	13
14	0.217	0.218	0.219	0.221	0.222	0.223	0.224	0.225	0.226	0.228	14
15	0.229	0.230	0.231	0.232	0.234	0.235	0.236	0.237	0.239	0.240	15
16	0.241	0.243	0.244	0.245	0.247	0.248	0.250	0.251	0.252	0.254	16
17	0.255	0.257	0.258	0.260	0.261	0.262	0.264	0.266	0.267	0.269	17
18	0.270	0.272	0.273	0.275	0.276	0.278	0.280	0.281	0.283	0.284	18
19	0.286	0.288	0.289	0.291	0.293	0.295	0.296	0.298	0.300	0.301	19
20	0.303	0.305	0.307	0.309	0.310	0.312	0.314	0.316	0.318	0.320	20
21	0.321	0.323	0.325	0.327	0.329	0.331	0.333	0.335	0.337	0.339	21
22	0.341	0.343	0.345	0.347	0.349	0.351	0.353	0.355	0.357	0.359	22
23	0.361	0.363	0.365	0.367	0.369	0.371	0.373	0.376	0.378	0.380	23
24	0.382	0.384	0.386	0.389	0.391	0.393	0.395	0.397	0.400	0.402	24
25	0.404	0.406	0.409	0.411	0.413	0.416	0.418	0.420	0.423	0.425	25
26	0.427	0.430	0.432	0.434	0.437	0.439	0.442	0.444	0.446	0.449	26
27	0.451	0.454	0.456	0.459	0.461	0.464	0.466	0.469	0.471	0.474	27
28	0.476	0.479	0.481	0.484	0.487	0.489	0.492	0.494	0.497	0.500	28
29	0.502	0.505	0.507	0.510	0.513	0.515	0.518	0.521	0.523	0.526	29
30	0.529	0.532	0.534	0.537	0.540	0.543	0.545	0.548	0.551	0.554	30
31	0.557	0.559	0.562	0.565	0.568	0.571	0.574	0.576	0.579	0.582	31
32	0.585	0.588	0.591	0.594	0.597	0.600	0.603	0.605	0.608	0.611	32
33	0.614	0.617	0.620	0.623	0.626	0.629	0.632	0.635	0.638	0.641	33
34	0.645	0.648	0.651	0.654	0.657	0.660	0.663	0.666	0.669	0.672	34
35	0.676	0.679	0.682	0.685	0.688	0.691	0.695	0.698	0.701	0.704	35
36	0.707	0.711	0.714	0.717	0.720	0.724	0.727	0.730	0.733	0.737	36
37	0.740	0.743	0.747	0.750	0.753	0.756	0.760	0.763	0.767	0.770	37
38	0.773	0.777	0.780	0.783	0.787	0.790	0.794	0.797	0.801	0.804	38
39	0.807	0.811	0.814	0.818	0.821	0.825	0.828	0.832	0.835	0.839	39
40	0.842	0.846	0.849	0.853	0.857	0.860	0.864	0.867	0.871	0.874	40

**TABLE 1D/200**  
**NOMINAL CAPACITY 200 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/200).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	5
6	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	6
7	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	7
8	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.36	0.36	8
9	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.37	0.37	9
10	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.38	0.38	0.38	10
11	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39	0.39	0.39	11
12	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	12
13	0.41	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.43	13
14	0.43	0.44	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.46	14
15	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.48	0.48	15
16	0.48	0.49	0.49	0.49	0.49	0.50	0.50	0.50	0.50	0.51	16
17	0.51	0.51	0.52	0.52	0.52	0.52	0.53	0.53	0.53	0.54	17
18	0.54	0.54	0.55	0.55	0.55	0.56	0.56	0.56	0.57	0.57	18
19	0.57	0.58	0.58	0.58	0.59	0.59	0.59	0.60	0.60	0.60	19
20	0.61	0.61	0.61	0.62	0.62	0.62	0.63	0.63	0.64	0.64	20
21	0.64	0.65	0.65	0.65	0.66	0.66	0.67	0.67	0.67	0.68	21
22	0.68	0.69	0.69	0.69	0.70	0.70	0.71	0.71	0.71	0.72	22
23	0.72	0.73	0.73	0.73	0.74	0.74	0.75	0.75	0.76	0.76	23
24	0.76	0.77	0.77	0.78	0.78	0.79	0.79	0.79	0.80	0.80	24
25	0.81	0.81	0.82	0.82	0.83	0.83	0.84	0.84	0.85	0.85	25
26	0.85	0.86	0.86	0.87	0.87	0.88	0.88	0.89	0.89	0.90	26
27	0.90	0.91	0.91	0.92	0.92	0.93	0.93	0.94	0.94	0.95	27
28	0.95	0.96	0.96	0.97	0.97	0.98	0.98	0.99	0.99	1.00	28
29	1.00	1.01	1.01	1.02	1.03	1.03	1.04	1.04	1.05	1.05	29
30	1.06	1.06	1.07	1.07	1.08	1.09	1.09	1.10	1.10	1.11	30
31	1.11	1.12	1.12	1.13	1.14	1.14	1.15	1.15	1.16	1.16	31
32	1.17	1.18	1.18	1.19	1.19	1.20	1.21	1.21	1.22	1.22	32
33	1.23	1.23	1.24	1.25	1.25	1.26	1.26	1.27	1.28	1.28	33
34	1.29	1.30	1.30	1.31	1.31	1.32	1.33	1.33	1.34	1.34	34
35	1.35	1.36	1.36	1.37	1.38	1.38	1.39	1.40	1.40	1.41	35
36	1.41	1.42	1.43	1.43	1.44	1.45	1.45	1.46	1.47	1.47	36
37	1.48	1.49	1.49	1.50	1.51	1.51	1.52	1.53	1.53	1.54	37
38	1.55	1.55	1.56	1.57	1.57	1.58	1.59	1.59	1.60	1.61	38
39	1.61	1.62	1.63	1.64	1.64	1.65	1.66	1.66	1.67	1.68	39
40	1.68	1.69	1.70	1.71	1.71	1.72	1.73	1.73	1.74	1.75	40



**TABLE 1D/250**  
**NOMINAL CAPACITY 250 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/250).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	5
6	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	6
7	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	7
8	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.45	8
9	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46	9
10	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47	10
11	0.48	0.48	0.48	0.48	0.48	0.48	0.49	0.49	0.49	0.49	11
12	0.49	0.50	0.50	0.50	0.50	0.51	0.51	0.51	0.51	0.52	12
13	0.52	0.52	0.52	0.52	0.53	0.53	0.53	0.54	0.54	0.54	13
14	0.54	0.55	0.55	0.55	0.55	0.56	0.56	0.56	0.57	0.57	14
15	0.57	0.57	0.58	0.58	0.58	0.59	0.59	0.59	0.60	0.60	15
16	0.60	0.61	0.61	0.61	0.62	0.62	0.62	0.63	0.63	0.63	16
17	0.64	0.64	0.65	0.65	0.65	0.66	0.66	0.66	0.67	0.67	17
18	0.68	0.68	0.68	0.69	0.69	0.69	0.70	0.70	0.71	0.71	18
19	0.72	0.72	0.72	0.73	0.73	0.74	0.74	0.74	0.75	0.75	19
20	0.76	0.76	0.77	0.77	0.78	0.78	0.78	0.79	0.79	0.80	20
21	0.80	0.81	0.81	0.82	0.82	0.83	0.83	0.84	0.84	0.85	21
22	0.85	0.86	0.86	0.87	0.87	0.88	0.88	0.89	0.89	0.90	22
23	0.90	0.91	0.91	0.92	0.92	0.93	0.93	0.94	0.94	0.95	23
24	0.95	0.96	0.97	0.97	0.98	0.98	0.99	0.99	1.00	1.00	24
25	1.01	1.02	1.02	1.03	1.03	1.04	1.04	1.05	1.06	1.06	25
26	1.07	1.07	1.08	1.09	1.09	1.10	1.10	1.11	1.12	1.12	26
27	1.13	1.13	1.14	1.15	1.15	1.16	1.17	1.17	1.18	1.18	27
28	1.19	1.20	1.20	1.21	1.22	1.22	1.23	1.24	1.24	1.25	28
29	1.26	1.26	1.27	1.28	1.28	1.29	1.30	1.30	1.31	1.32	29
30	1.32	1.33	1.34	1.34	1.35	1.36	1.36	1.37	1.38	1.38	30
31	1.39	1.40	1.41	1.41	1.42	1.43	1.43	1.44	1.45	1.46	31
32	1.46	1.47	1.48	1.48	1.49	1.50	1.51	1.51	1.52	1.53	32
33	1.54	1.54	1.55	1.56	1.57	1.57	1.58	1.59	1.60	1.60	33
34	1.61	1.62	1.63	1.63	1.64	1.65	1.66	1.67	1.67	1.68	34
35	1.69	1.70	1.70	1.71	1.72	1.73	1.74	1.74	1.75	1.76	35
36	1.77	1.78	1.78	1.79	1.80	1.81	1.82	1.83	1.83	1.84	36
37	1.85	1.86	1.87	1.87	1.88	1.89	1.90	1.91	1.92	1.92	37
38	1.93	1.94	1.95	1.96	1.97	1.98	1.98	1.99	2.00	2.01	38
39	2.02	2.03	2.04	2.04	2.05	2.06	2.07	2.08	2.09	2.10	39
40	2.11	2.11	2.12	2.13	2.14	2.15	2.16	2.17	2.18	2.19	40

**TABLE 1D/500**  
**NOMINAL CAPACITY 500 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/500).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	5
6	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	6
7	0.86	0.86	0.86	0.87	0.87	0.87	0.87	0.87	0.87	0.87	7
8	0.87	0.88	0.88	0.88	0.88	0.88	0.88	0.89	0.89	0.89	8
9	0.89	0.90	0.90	0.90	0.90	0.91	0.91	0.91	0.91	0.92	9
10	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94	0.95	10
11	0.95	0.95	0.96	0.96	0.97	0.97	0.97	0.98	0.98	0.99	11
12	0.99	0.99	1.00	1.00	1.01	1.01	1.02	1.02	1.03	1.03	12
13	1.03	1.04	1.04	1.05	1.05	1.06	1.06	1.07	1.08	1.08	13
14	1.09	1.09	1.10	1.10	1.11	1.11	1.12	1.13	1.13	1.14	14
15	1.14	1.15	1.16	1.16	1.17	1.17	1.18	1.19	1.19	1.20	15
16	1.21	1.21	1.22	1.23	1.23	1.24	1.25	1.25	1.26	1.27	16
17	1.28	1.28	1.29	1.30	1.31	1.31	1.32	1.33	1.34	1.34	17
18	1.35	1.36	1.37	1.37	1.38	1.39	1.40	1.41	1.41	1.42	18
19	1.43	1.44	1.45	1.46	1.46	1.47	1.48	1.49	1.50	1.51	19
20	1.52	1.52	1.53	1.54	1.55	1.56	1.57	1.58	1.59	1.60	20
21	1.61	1.62	1.63	1.64	1.64	1.65	1.66	1.67	1.68	1.69	21
22	1.70	1.71	1.72	1.73	1.74	1.75	1.76	1.77	1.78	1.79	22
23	1.80	1.81	1.82	1.84	1.85	1.86	1.87	1.88	1.89	1.90	23
24	1.91	1.92	1.93	1.94	1.95	1.96	1.98	1.99	2.00	2.01	24
25	2.02	2.03	2.04	2.05	2.07	2.08	2.09	2.10	2.11	2.12	25
26	2.14	2.15	2.16	2.17	2.18	2.20	2.21	2.22	2.23	2.24	26
27	2.26	2.27	2.28	2.29	2.31	2.32	2.33	2.34	2.36	2.37	27
28	2.38	2.39	2.41	2.42	2.43	2.45	2.46	2.47	2.48	2.50	28
29	2.51	2.52	2.54	2.55	2.56	2.58	2.59	2.60	2.62	2.63	29
30	2.64	2.66	2.67	2.69	2.70	2.71	2.73	2.74	2.75	2.77	30
31	2.78	2.80	2.81	2.82	2.84	2.85	2.87	2.88	2.90	2.91	31
32	2.93	2.94	2.95	2.97	2.98	3.00	3.01	3.03	3.04	3.06	32
33	3.07	3.09	3.10	3.12	3.13	3.15	3.16	3.18	3.19	3.21	33
34	3.22	3.24	3.25	3.27	3.28	3.30	3.32	3.33	3.35	3.36	34
35	3.38	3.39	3.41	3.42	3.44	3.46	3.47	3.49	3.50	3.52	35
36	3.54	3.55	3.57	3.59	3.60	3.62	3.63	3.65	3.67	3.68	36
37	3.70	3.72	3.73	3.75	3.77	3.78	3.80	3.82	3.83	3.85	37
38	3.87	3.88	3.90	3.92	3.93	3.95	3.97	3.99	4.00	4.02	38
39	4.04	4.05	4.07	4.09	4.11	4.12	4.14	4.16	4.18	4.19	39
40	4.21	4.23	4.25	4.26	4.28	4.30	4.32	4.34	4.35	4.37	40

**TABLE 1D/1 000**  
**NOMINAL CAPACITY 1 000 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )

Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/1 000).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	5
6	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	6
7	1.73	1.73	1.73	1.73	1.73	1.74	1.74	1.74	1.74	1.75	7
8	1.75	1.75	1.76	1.76	1.76	1.77	1.77	1.77	1.78	1.78	8
9	1.79	1.79	1.80	1.80	1.81	1.81	1.82	1.82	1.83	1.83	9
10	1.84	1.84	1.85	1.86	1.86	1.87	1.87	1.88	1.89	1.89	10
11	1.90	1.91	1.92	1.92	1.93	1.94	1.95	1.95	1.96	1.97	11
12	1.98	1.99	2.00	2.01	2.01	2.02	2.03	2.04	2.05	2.06	12
13	2.07	2.08	2.09	2.10	2.11	2.12	2.13	2.14	2.15	2.16	13
14	2.17	2.18	2.19	2.21	2.22	2.23	2.24	2.25	2.26	2.28	14
15	2.29	2.30	2.31	2.32	2.34	2.35	2.36	2.37	2.39	2.40	15
16	2.41	2.43	2.44	2.45	2.47	2.48	2.50	2.51	2.52	2.54	16
17	2.55	2.57	2.58	2.60	2.61	2.62	2.64	2.66	2.67	2.69	17
18	2.70	2.72	2.73	2.75	2.76	2.78	2.80	2.81	2.83	2.84	18
19	2.86	2.88	2.89	2.91	2.93	2.95	2.96	2.98	3.00	3.01	19
20	3.03	3.05	3.07	3.09	3.10	3.12	3.14	3.16	3.18	3.20	20
21	3.21	3.23	3.25	3.27	3.29	3.31	3.33	3.35	3.37	3.39	21
22	3.41	3.43	3.45	3.47	3.49	3.51	3.53	3.55	3.57	3.59	22
23	3.61	3.63	3.65	3.67	3.69	3.71	3.73	3.76	3.78	3.80	23
24	3.82	3.84	3.86	3.89	3.91	3.93	3.95	3.97	4.00	4.02	24
25	4.04	4.06	4.09	4.11	4.13	4.16	4.18	4.20	4.23	4.25	25
26	4.27	4.30	4.32	4.34	4.37	4.39	4.42	4.44	4.46	4.49	26
27	4.51	4.54	4.56	4.59	4.61	4.64	4.66	4.69	4.71	4.74	27
28	4.76	4.79	4.81	4.84	4.87	4.89	4.92	4.94	4.97	5.00	28
29	5.02	5.05	5.07	5.10	5.13	5.15	5.18	5.21	5.23	5.26	29
30	5.29	5.32	5.34	5.37	5.40	5.43	5.45	5.48	5.51	5.54	30
31	5.57	5.59	5.62	5.65	5.68	5.71	5.74	5.76	5.79	5.82	31
32	5.85	5.88	5.91	5.94	5.97	6.00	6.03	6.05	6.08	6.11	32
33	6.14	6.17	6.20	6.23	6.26	6.29	6.32	6.35	6.38	6.41	33
34	6.45	6.48	6.51	6.54	6.57	6.60	6.63	6.66	6.69	6.72	34
35	6.76	6.79	6.82	6.85	6.88	6.91	6.95	6.98	7.01	7.04	35
36	7.07	7.11	7.14	7.17	7.20	7.24	7.27	7.30	7.33	7.37	36
37	7.40	7.43	7.47	7.50	7.53	7.56	7.60	7.63	7.67	7.70	37
38	7.73	7.77	7.80	7.83	7.87	7.90	7.94	7.97	8.01	8.04	38
39	8.07	8.11	8.14	8.18	8.21	8.25	8.28	8.32	8.35	8.39	39
40	8.42	8.46	8.49	8.53	8.57	8.60	8.64	8.67	8.71	8.74	40

**TABLE 1D/1 500**  
**NOMINAL CAPACITY 1 500 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/1 500).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	2.59	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	5
6	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.59	6
7	2.59	2.59	2.59	2.60	2.60	2.60	2.61	2.61	2.61	2.62	7
8	2.62	2.63	2.63	2.64	2.64	2.65	2.65	2.66	2.67	2.67	8
9	2.68	2.69	2.69	2.70	2.71	2.72	2.72	2.73	2.74	2.75	9
10	2.76	2.76	2.77	2.78	2.79	2.80	2.81	2.82	2.83	2.84	10
11	2.85	2.86	2.87	2.89	2.90	2.91	2.92	2.93	2.94	2.96	11
12	2.97	2.98	2.99	3.01	3.02	3.03	3.05	3.06	3.08	3.09	12
13	3.10	3.12	3.13	3.15	3.16	3.18	3.19	3.21	3.23	3.24	13
14	3.26	3.27	3.29	3.31	3.33	3.34	3.36	3.38	3.39	3.41	14
15	3.43	3.45	3.47	3.49	3.50	3.52	3.54	3.56	3.58	3.60	15
16	3.62	3.64	3.66	3.68	3.70	3.72	3.74	3.76	3.78	3.81	16
17	3.83	3.85	3.87	3.89	3.92	3.94	3.96	3.98	4.01	4.03	17
18	4.05	4.07	4.10	4.12	4.15	4.17	4.19	4.22	4.24	4.27	18
19	4.29	4.32	4.34	4.37	4.39	4.42	4.44	4.47	4.50	4.52	19
20	4.55	4.57	4.60	4.63	4.66	4.68	4.71	4.74	4.76	4.79	20
21	4.82	4.85	4.88	4.91	4.93	4.96	4.99	5.02	5.05	5.08	21
22	5.11	5.14	5.17	5.20	5.23	5.26	5.29	5.32	5.35	5.38	22
23	5.41	5.44	5.47	5.51	5.54	5.57	5.60	5.63	5.66	5.70	23
24	5.73	5.76	5.79	5.83	5.86	5.89	5.93	5.96	5.99	6.03	24
25	6.06	6.10	6.13	6.16	6.20	6.23	6.27	6.30	6.34	6.37	25
26	6.41	6.44	6.48	6.52	6.55	6.59	6.62	6.66	6.70	6.73	26
27	6.77	6.81	6.84	6.88	6.92	6.95	6.99	7.03	7.07	7.11	27
28	7.14	7.18	7.22	7.26	7.30	7.34	7.38	7.41	7.45	7.49	28
29	7.53	7.57	7.61	7.65	7.69	7.73	7.77	7.81	7.85	7.89	29
30	7.93	7.97	8.02	8.06	8.10	8.14	8.18	8.22	8.26	8.31	30
31	8.35	8.39	8.43	8.47	8.52	8.56	8.60	8.65	8.69	8.73	31
32	8.78	8.82	8.86	8.91	8.95	8.99	9.04	9.08	9.13	9.17	32
33	9.22	9.26	9.30	9.35	9.39	9.44	9.49	9.53	9.58	9.62	33
34	9.67	9.71	9.76	9.81	9.85	9.90	9.95	9.99	10.04	10.09	34
35	10.13	10.18	10.23	10.27	10.32	10.37	10.42	10.47	10.51	10.56	35
36	10.61	10.66	10.71	10.76	10.80	10.85	10.90	10.95	11.00	11.05	36
37	11.10	11.15	11.20	11.25	11.30	11.35	11.40	11.45	11.50	11.55	37
38	11.60	11.65	11.70	11.75	11.80	11.85	11.91	11.96	12.01	12.06	38
39	12.11	12.16	12.22	12.27	12.32	12.37	12.42	12.48	12.53	12.58	39
40	12.63	12.69	12.74	12.79	12.85	12.90	12.95	13.01	13.06	13.12	40

**TABLE 1D/2 000**  
**NOMINAL CAPACITY 2 000 cm<sup>3</sup>**

(Coefficient of cubical thermal expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )  
 Add to mass (grams) of pure water at  $t^{\circ}\text{C}$  to obtain capacity of vessel at  $27^{\circ}\text{C}$   
 (in conjunction with Table 2/2 000).

TEMPERATURE OF WATER $t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	TEMPERATURE OF WATER $t^{\circ}\text{C}$
5	3.45	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.43	3.43	5
6	3.43	3.43	3.44	3.44	3.44	3.44	3.44	3.44	3.45	3.45	6
7	3.45	3.46	3.46	3.46	3.47	3.47	3.48	3.48	3.49	3.49	7
8	3.50	3.50	3.51	3.52	3.52	3.53	3.54	3.55	3.56	3.56	8
9	3.57	3.58	3.59	3.60	3.61	3.62	3.63	3.64	3.65	3.66	9
10	3.67	3.69	3.70	3.71	3.72	3.74	3.75	3.76	3.78	3.79	10
11	3.80	3.82	3.83	3.85	3.86	3.88	3.89	3.91	3.93	3.94	11
12	3.96	3.98	3.99	4.01	4.03	4.05	4.06	4.08	4.10	4.12	12
13	4.14	4.16	4.18	4.20	4.22	4.24	4.26	4.28	4.30	4.32	13
14	4.34	4.37	4.39	4.41	4.43	4.46	4.48	4.50	4.53	4.55	14
15	4.57	4.60	4.62	4.65	4.67	4.70	4.72	4.75	4.77	4.80	15
16	4.83	4.85	4.88	4.91	4.93	4.96	4.99	5.02	5.05	5.07	16
17	5.10	5.13	5.16	5.19	5.22	5.25	5.28	5.31	5.34	5.37	17
18	5.40	5.43	5.46	5.50	5.53	5.56	5.59	5.62	5.66	5.69	18
19	5.72	5.76	5.79	5.82	5.86	5.89	5.93	5.96	5.99	6.03	19
20	6.06	6.10	6.14	6.17	6.21	6.24	6.28	6.32	6.35	6.39	20
21	6.43	6.47	6.50	6.54	6.58	6.62	6.66	6.69	6.73	6.77	21
22	6.81	6.85	6.89	6.93	6.97	7.01	7.05	7.09	7.13	7.17	22
23	7.22	7.26	7.30	7.34	7.38	7.42	7.47	7.51	7.55	7.60	23
24	7.64	7.68	7.73	7.77	7.81	7.86	7.90	7.95	7.99	8.04	24
25	8.08	8.13	8.17	8.22	8.27	8.31	8.36	8.40	8.45	8.50	25
26	8.54	8.59	8.64	8.69	8.74	8.78	8.83	8.88	8.93	8.98	26
27	9.03	9.08	9.12	9.17	9.22	9.27	9.32	9.37	9.42	9.47	27
28	9.53	9.58	9.63	9.68	9.73	9.78	9.83	9.89	9.94	9.99	28
29	10.04	10.10	10.15	10.20	10.25	10.31	10.36	10.42	10.47	10.52	29
30	10.58	10.63	10.69	10.74	10.80	10.85	10.91	10.96	11.02	11.07	30
31	11.13	11.19	11.24	11.30	11.36	11.41	11.47	11.53	11.59	11.64	31
32	11.70	11.76	11.82	11.87	11.93	11.99	12.05	12.11	12.17	12.23	32
33	12.29	12.35	12.41	12.47	12.53	12.59	12.65	12.71	12.77	12.83	33
34	12.89	12.95	13.01	13.07	13.14	13.20	13.26	13.32	13.39	13.45	34
35	13.51	13.57	13.64	13.70	13.76	13.83	13.89	13.95	14.02	14.08	35
36	14.15	14.21	14.28	14.34	14.41	14.47	14.54	14.60	14.67	14.73	36
37	14.80	14.86	14.93	15.00	15.06	15.13	15.20	15.26	15.33	15.40	37
38	15.47	15.53	15.60	15.67	15.74	15.81	15.87	15.94	16.01	16.08	38
39	16.15	16.22	16.29	16.36	16.43	16.50	16.57	16.64	16.71	16.78	39
40	16.85	16.92	16.99	17.06	17.13	17.20	17.27	17.34	17.42	17.49	40

TABLE 3A FACTOR TO CONVERT MASS (GRAMS) OF

(Coefficient of cubical thermal

$t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4
5	0.073 635	0.073 636	0.073 637	0.073 639	0.073 640
6	0.073 648	0.073 649	0.073 650	0.073 651	0.073 653
7	0.073 660	0.073 661	0.073 663	0.073 664	0.073 665
8	0.073 673	0.073 674	0.073 675	0.073 677	0.073 678
9	0.073 685	0.073 687	0.073 688	0.073 689	0.073 690
10	0.073 698	0.073 699	0.073 701	0.073 702	0.073 703
11	0.073 711	0.073 712	0.073 713	0.073 714	0.073 716
12	0.073 723	0.073 725	0.073 726	0.073 727	0.073 728
13	0.073 736	0.073 737	0.073 738	0.073 740	0.073 741
14	0.073 749	0.073 750	0.073 751	0.073 752	0.073 754
15	0.073 761	0.073 762	0.073 764	0.073 765	0.073 766
16	0.073 774	0.073 775	0.073 776	0.073 778	0.073 779
17	0.073 786	0.073 788	0.073 789	0.073 790	0.073 791
18	0.073 799	0.073 800	0.073 802	0.073 803	0.073 804
19	0.073 812	0.073 813	0.073 814	0.073 815	0.073 817
20	0.073 824	0.073 826	0.073 827	0.073 828	0.073 829
21	0.073 837	0.073 838	0.073 839	0.073 841	0.073 842
22	0.073 850	0.073 851	0.073 852	0.073 853	0.073 855
23	0.073 862	0.073 863	0.073 865	0.073 866	0.073 867
24	0.073 875	0.073 876	0.073 877	0.073 879	0.073 880
25	0.073 888	0.073 889	0.073 890	0.073 891	0.073 893
26	0.073 900	0.073 901	0.073 903	0.073 904	0.073 905
27	0.073 913	0.073 914	0.073 915	0.073 917	0.073 918
28	0.073 925	0.073 927	0.073 928	0.073 929	0.073 930
29	0.073 938	0.073 939	0.073 941	0.073 942	0.073 943
30	0.073 951	0.073 952	0.073 953	0.073 954	0.073 956
31	0.073 963	0.073 965	0.073 966	0.073 967	0.073 968
32	0.073 976	0.073 977	0.073 979	0.073 980	0.073 981
33	0.073 989	0.073 990	0.073 991	0.073 992	0.073 994
34	0.074 001	0.074 003	0.074 004	0.074 005	0.074 006
35	0.074 014	0.074 015	0.074 016	0.074 018	0.074 019
36	0.074 027	0.074 028	0.074 029	0.074 030	0.074 032
37	0.074 039	0.074 041	0.074 042	0.074 043	0.074 044
38	0.074 052	0.074 053	0.074 054	0.074 056	0.074 057
39	0.074 065	0.074 066	0.074 067	0.074 068	0.074 070
40	0.074 077	0.074 078	0.074 080	0.074 081	0.074 082

**MERCURY AT  $t^{\circ}\text{C}$  TO CAPACITY ( $\text{cm}^3$ ) OF VESSEL AT  $27^{\circ}\text{C}$** expansion of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )

<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b><math>t^{\circ}\text{C}</math></b>
0.073 641	0.073 643	0.073 644	0.073 645	0.073 646	<b>5</b>
0.073 654	0.073 655	0.073 656	0.073 658	0.073 659	<b>6</b>
0.073 666	0.073 668	0.073 669	0.073 670	0.073 672	<b>7</b>
0.073 679	0.073 680	0.073 682	0.073 683	0.073 684	<b>8</b>
0.073 692	0.073 693	0.073 694	0.073 696	0.073 697	<b>9</b>
0.073 704	0.073 706	0.073 707	0.073 708	0.073 709	<b>10</b>
0.073 717	0.073 718	0.073 720	0.073 721	0.073 722	<b>11</b>
0.073 730	0.073 731	0.073 732	0.073 733	0.073 735	<b>12</b>
0.073 742	0.073 743	0.073 745	0.073 746	0.073 747	<b>13</b>
0.073 755	0.073 756	0.073 757	0.073 759	0.073 760	<b>14</b>
0.073 767	0.073 769	0.073 770	0.073 771	0.073 773	<b>15</b>
0.073 780	0.073 781	0.073 783	0.073 784	0.073 785	<b>16</b>
0.073 793	0.073 794	0.073 795	0.073 797	0.073 798	<b>17</b>
0.073 805	0.073 807	0.073 808	0.073 809	0.073 810	<b>18</b>
0.073 818	0.073 819	0.073 821	0.073 822	0.073 823	<b>19</b>
0.073 831	0.073 832	0.073 833	0.073 834	0.073 836	<b>20</b>
0.073 843	0.073 845	0.073 846	0.073 847	0.073 848	<b>21</b>
0.073 856	0.073 857	0.073 858	0.073 860	0.073 861	<b>22</b>
0.073 869	0.073 870	0.073 871	0.073 872	0.073 874	<b>23</b>
0.073 881	0.073 882	0.073 884	0.073 885	0.073 886	<b>24</b>
0.073 894	0.073 895	0.073 896	0.073 898	0.073 899	<b>25</b>
0.073 906	0.073 908	0.073 909	0.073 910	0.073 912	<b>26</b>
0.073 919	0.073 920	0.073 922	0.073 923	0.073 924	<b>27</b>
0.073 932	0.073 933	0.073 934	0.073 936	0.073 937	<b>28</b>
0.073 944	0.073 946	0.073 947	0.073 948	0.073 949	<b>29</b>
0.073 957	0.073 958	0.073 960	0.073 961	0.073 962	<b>30</b>
0.073 970	0.073 971	0.073 972	0.073 973	0.073 975	<b>31</b>
0.073 982	0.073 984	0.073 985	0.073 986	0.073 987	<b>32</b>
0.073 995	0.073 996	0.073 997	0.073 999	0.074 000	<b>33</b>
0.074 008	0.074 009	0.074 010	0.074 011	0.074 013	<b>34</b>
0.074 020	0.074 022	0.074 023	0.074 024	0.074 025	<b>35</b>
0.074 033	0.074 034	0.074 035	0.074 037	0.074 038	<b>36</b>
0.074 046	0.074 047	0.074 048	0.074 049	0.074 051	<b>37</b>
0.074 058	0.074 059	0.074 061	0.074 062	0.074 063	<b>38</b>
0.074 071	0.074 072	0.074 073	0.074 075	0.074 076	<b>39</b>
0.074 084	0.074 085	0.074 086	0.074 087	0.074 089	<b>40</b>

TABLE 3B FACTOR TO CONVERT MASS (GRAMS) OF

(Coefficient of cubical thermal

$t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4
5	0.073 643	0.073 644	0.073 645	0.073 647	0.073 648
6	0.073 655	0.073 657	0.073 658	0.073 659	0.073 660
7	0.073 668	0.073 669	0.073 670	0.073 671	0.073 672
8	0.073 680	0.073 681	0.073 682	0.073 683	0.073 685
9	0.073 692	0.073 693	0.073 695	0.073 696	0.073 697
10	0.073 704	0.073 706	0.073 707	0.073 708	0.073 709
11	0.073 717	0.073 718	0.073 719	0.073 720	0.073 721
12	0.073 729	0.073 730	0.073 731	0.073 733	0.073 734
13	0.073 741	0.073 742	0.073 744	0.073 745	0.073 746
14	0.073 753	0.073 755	0.073 756	0.073 757	0.073 758
15	0.073 766	0.073 767	0.073 768	0.073 769	0.073 771
16	0.073 778	0.073 779	0.073 780	0.073 782	0.073 783
17	0.073 790	0.073 791	0.073 793	0.073 794	0.073 795
18	0.073 802	0.073 804	0.073 805	0.073 806	0.073 807
19	0.073 815	0.073 816	0.073 817	0.073 818	0.073 820
20	0.073 827	0.073 828	0.073 829	0.073 831	0.073 832
21	0.073 839	0.073 840	0.073 842	0.073 843	0.073 844
22	0.073 851	0.073 853	0.073 854	0.073 855	0.073 856
23	0.073 864	0.073 865	0.073 866	0.073 867	0.073 869
24	0.073 876	0.073 877	0.073 878	0.073 880	0.073 881
25	0.073 888	0.073 889	0.073 891	0.073 892	0.073 893
26	0.073 901	0.073 902	0.073 903	0.073 904	0.073 905
27	0.073 913	0.073 914	0.073 915	0.073 916	0.073 918
28	0.073 925	0.073 926	0.073 928	0.073 929	0.073 930
29	0.073 937	0.073 939	0.073 940	0.073 941	0.073 942
30	0.073 950	0.073 951	0.073 952	0.073 953	0.073 955
31	0.073 962	0.073 963	0.073 964	0.073 966	0.073 967
32	0.073 974	0.073 975	0.073 977	0.073 978	0.073 979
33	0.073 986	0.073 988	0.073 989	0.073 990	0.073 991
34	0.073 999	0.074 000	0.074 001	0.074 002	0.074 004
35	0.074 011	0.074 012	0.074 013	0.074 015	0.074 016
36	0.074 023	0.074 024	0.074 026	0.074 027	0.074 028
37	0.074 036	0.074 037	0.074 038	0.074 039	0.074 040
38	0.074 048	0.074 049	0.074 050	0.074 052	0.074 053
39	0.074 060	0.074 061	0.074 063	0.074 064	0.074 065
40	0.074 072	0.074 074	0.074 075	0.074 076	0.074 077



**MERCURY AT  $t^{\circ}\text{C}$  TO CAPACITY ( $\text{cm}^3$ ) OF VESSEL AT  $27^{\circ}\text{C}$** expansion of glass  $15 \times 10^{-6}/^{\circ}\text{C}$ )

0.5	0.6	0.7	0.8	0.9	$t^{\circ}\text{C}$
0.073 649	0.073 650	0.073 652	0.073 653	0.073 654	<b>5</b>
0.073 661	0.073 663	0.073 664	0.073 665	0.073 666	<b>6</b>
0.073 674	0.073 675	0.073 676	0.073 677	0.073 679	<b>7</b>
0.073 686	0.073 687	0.073 688	0.073 690	0.073 691	<b>8</b>
0.073 698	0.073 699	0.073 701	0.073 702	0.073 703	<b>9</b>
0.073 710	0.073 712	0.073 713	0.073 714	0.073 715	<b>10</b>
0.073 723	0.073 724	0.073 725	0.073 726	0.073 728	<b>11</b>
0.073 735	0.073 736	0.073 737	0.073 739	0.073 740	<b>12</b>
0.073 747	0.073 748	0.073 750	0.073 751	0.073 752	<b>13</b>
0.073 759	0.073 761	0.073 762	0.073 763	0.073 764	<b>14</b>
0.073 772	0.073 773	0.073 774	0.073 775	0.073 777	<b>15</b>
0.073 784	0.073 785	0.073 786	0.073 788	0.073 789	<b>16</b>
0.073 796	0.073 797	0.073 799	0.073 800	0.073 801	<b>17</b>
0.073 809	0.073 810	0.073 811	0.073 812	0.073 813	<b>18</b>
0.073 821	0.073 822	0.073 823	0.073 824	0.073 826	<b>19</b>
0.073 833	0.073 834	0.073 835	0.073 837	0.073 838	<b>20</b>
0.073 845	0.073 847	0.073 848	0.073 849	0.073 850	<b>21</b>
0.073 858	0.073 859	0.073 860	0.073 861	0.073 862	<b>22</b>
0.073 870	0.073 871	0.073 872	0.073 874	0.073 875	<b>23</b>
0.073 882	0.073 883	0.073 885	0.073 886	0.073 887	<b>24</b>
0.073 894	0.073 896	0.073 897	0.073 898	0.073 899	<b>25</b>
0.073 907	0.073 908	0.073 909	0.073 910	0.073 912	<b>26</b>
0.073 919	0.073 920	0.073 921	0.073 923	0.073 924	<b>27</b>
0.073 931	0.073 932	0.073 934	0.073 935	0.073 936	<b>28</b>
0.073 943	0.073 945	0.073 946	0.073 947	0.073 948	<b>29</b>
0.073 956	0.073 957	0.073 958	0.073 959	0.073 961	<b>30</b>
0.073 968	0.073 969	0.073 970	0.073 972	0.073 973	<b>31</b>
0.073 980	0.073 982	0.073 983	0.073 984	0.073 985	<b>32</b>
0.073 993	0.073 994	0.073 995	0.073 996	0.073 997	<b>33</b>
0.074 005	0.074 006	0.074 007	0.074 009	0.074 010	<b>34</b>
0.074 017	0.074 018	0.074 020	0.074 021	0.074 022	<b>35</b>
0.074 029	0.074 031	0.074 032	0.074 033	0.074 034	<b>36</b>
0.074 042	0.074 043	0.074 044	0.074 045	0.074 047	<b>37</b>
0.074 054	0.074 055	0.074 056	0.074 058	0.074 059	<b>38</b>
0.074 066	0.074 067	0.074 069	0.074 070	0.074 071	<b>39</b>
0.074 079	0.074 080	0.074 081	0.074 082	0.074 083	<b>40</b>

TABLE 3C FACTOR TO CONVERT MASS (GRAMS) OF

(Coefficient of cubical thermal

$t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4
5	0.073 659	0.073 660	0.073 662	0.073 663	0.073 664
6	0.073 671	0.073 672	0.073 673	0.073 674	0.073 675
7	0.073 682	0.073 683	0.073 685	0.073 686	0.073 687
8	0.073 694	0.073 695	0.073 696	0.073 697	0.073 698
9	0.073 705	0.073 706	0.073 708	0.073 709	0.073 710
10	0.073 717	0.073 718	0.073 719	0.073 720	0.073 721
11	0.073 728	0.073 730	0.073 731	0.073 732	0.073 733
12	0.073 740	0.073 741	0.073 742	0.073 743	0.073 744
13	0.073 751	0.073 753	0.073 754	0.073 755	0.073 756
14	0.073 763	0.073 764	0.073 765	0.073 766	0.073 768
15	0.073 774	0.073 776	0.073 777	0.073 778	0.073 779
16	0.073 786	0.073 787	0.073 788	0.073 789	0.073 791
17	0.073 797	0.073 799	0.073 800	0.073 801	0.073 802
18	0.073 809	0.073 810	0.073 811	0.073 812	0.073 814
19	0.073 821	0.073 822	0.073 823	0.073 824	0.073 825
20	0.073 832	0.073 833	0.073 834	0.073 836	0.073 837
21	0.073 844	0.073 845	0.073 846	0.073 847	0.073 848
22	0.073 855	0.073 856	0.073 857	0.073 859	0.073 860
23	0.073 867	0.073 868	0.073 869	0.073 870	0.073 871
24	0.073 878	0.073 879	0.073 880	0.073 882	0.073 883
25	0.073 890	0.073 891	0.073 892	0.073 893	0.073 894
26	0.073 901	0.073 902	0.073 904	0.073 905	0.073 906
27	0.073 913	0.073 914	0.073 915	0.073 916	0.073 917
28	0.073 924	0.073 925	0.073 927	0.073 928	0.073 929
29	0.073 936	0.073 937	0.073 938	0.073 939	0.073 940
30	0.073 947	0.073 949	0.073 950	0.073 951	0.073 952
31	0.073 959	0.073 960	0.073 961	0.073 962	0.073 964
32	0.073 970	0.073 972	0.073 973	0.073 974	0.073 975
33	0.073 982	0.073 983	0.073 984	0.073 985	0.073 987
34	0.073 994	0.073 995	0.073 996	0.073 997	0.073 998
35	0.074 005	0.074 006	0.074 007	0.074 009	0.074 010
36	0.074 017	0.074 018	0.074 019	0.074 020	0.074 021
37	0.074 028	0.074 029	0.074 030	0.074 032	0.074 033
38	0.074 040	0.074 041	0.074 042	0.074 043	0.074 044
39	0.074 051	0.074 052	0.074 054	0.074 055	0.074 056
40	0.074 063	0.074 064	0.074 065	0.074 066	0.074 067

**MERCURY AT  $t^{\circ}\text{C}$  TO CAPACITY ( $\text{cm}^3$ ) OF VESSEL AT  $27^{\circ}\text{C}$** expansion of glass  $25 \times 10^{-6}/^{\circ}\text{C}$ )

0.5	0.6	0.7	0.8	0.9	$t^{\circ}\text{C}$
0.073 665	0.073 666	0.073 667	0.073 668	0.073 670	<b>5</b>
0.073 677	0.073 678	0.073 679	0.073 680	0.073 681	<b>6</b>
0.073 688	0.073 689	0.073 690	0.073 691	0.073 693	<b>7</b>
0.073 700	0.073 701	0.073 702	0.073 703	0.073 704	<b>8</b>
0.073 711	0.073 712	0.073 713	0.073 715	0.073 716	<b>9</b>
0.073 723	0.073 724	0.073 725	0.073 726	0.073 727	<b>10</b>
0.073 734	0.073 735	0.073 736	0.073 738	0.073 739	<b>11</b>
0.073 746	0.073 747	0.073 748	0.073 749	0.073 750	<b>12</b>
0.073 757	0.073 758	0.073 759	0.073 761	0.073 762	<b>13</b>
0.073 769	0.073 770	0.073 771	0.073 772	0.073 773	<b>14</b>
0.073 780	0.073 781	0.073 783	0.073 784	0.073 785	<b>15</b>
0.073 792	0.073 793	0.073 794	0.073 795	0.073 796	<b>16</b>
0.073 803	0.073 804	0.073 806	0.073 807	0.073 808	<b>17</b>
0.073 815	0.073 816	0.073 817	0.073 818	0.073 819	<b>18</b>
0.073 826	0.073 827	0.073 829	0.073 830	0.073 831	<b>19</b>
0.073 838	0.073 839	0.073 840	0.073 841	0.073 842	<b>20</b>
0.073 849	0.073 851	0.073 852	0.073 853	0.073 854	<b>21</b>
0.073 861	0.073 862	0.073 863	0.073 864	0.073 866	<b>22</b>
0.073 872	0.073 874	0.073 875	0.073 876	0.073 877	<b>23</b>
0.073 884	0.073 885	0.073 886	0.073 887	0.073 889	<b>24</b>
0.073 895	0.073 897	0.073 898	0.073 899	0.073 900	<b>25</b>
0.073 907	0.073 908	0.073 909	0.073 910	0.073 912	<b>26</b>
0.073 919	0.073 920	0.073 921	0.073 922	0.073 923	<b>27</b>
0.073 930	0.073 931	0.073 932	0.073 934	0.073 935	<b>28</b>
0.073 942	0.073 943	0.073 944	0.073 945	0.073 946	<b>29</b>
0.073 953	0.073 954	0.073 955	0.073 957	0.073 958	<b>30</b>
0.073 965	0.073 966	0.073 967	0.073 968	0.073 969	<b>31</b>
0.073 976	0.073 977	0.073 979	0.073 980	0.073 981	<b>32</b>
0.073 988	0.073 989	0.073 990	0.073 991	0.073 992	<b>33</b>
0.073 999	0.074 000	0.074 002	0.074 003	0.074 004	<b>34</b>
0.074 011	0.074 012	0.074 013	0.074 014	0.074 015	<b>35</b>
0.074 022	0.074 024	0.074 025	0.074 026	0.074 027	<b>36</b>
0.074 034	0.074 035	0.074 036	0.074 037	0.074 039	<b>37</b>
0.074 045	0.074 047	0.074 048	0.074 049	0.074 050	<b>38</b>
0.074 057	0.074 058	0.074 059	0.074 060	0.074 062	<b>39</b>
0.074 069	0.074 070	0.074 071	0.074 072	0.074 073	<b>40</b>

TABLE 3D FACTOR TO CONVERT MASS (GRAMS) OF

(Coefficient of cubical thermal

$t^{\circ}\text{C}$	0.0	0.1	0.2	0.3	0.4
5	0.073 667	0.073 668	0.073 670	0.073 671	0.073 672
6	0.073 678	0.073 680	0.073 681	0.073 682	0.073 683
7	0.073 690	0.073 691	0.073 692	0.073 693	0.073 694
8	0.073 701	0.073 702	0.073 703	0.073 704	0.073 705
9	0.073 712	0.073 713	0.073 714	0.073 715	0.073 716
10	0.073 723	0.073 724	0.073 725	0.073 726	0.073 728
11	0.073 734	0.073 735	0.073 736	0.073 738	0.073 739
12	0.073 745	0.073 747	0.073 748	0.073 749	0.073 750
13	0.073 757	0.073 758	0.073 759	0.073 760	0.073 761
14	0.073 768	0.073 769	0.073 770	0.073 771	0.073 772
15	0.073 779	0.073 780	0.073 781	0.073 782	0.073 783
16	0.073 790	0.073 791	0.073 792	0.073 793	0.073 794
17	0.073 801	0.073 802	0.073 803	0.073 805	0.073 806
18	0.073 812	0.073 813	0.073 815	0.073 816	0.073 817
19	0.073 823	0.073 825	0.073 826	0.073 827	0.073 828
20	0.073 835	0.073 836	0.073 837	0.073 838	0.073 839
21	0.073 846	0.073 847	0.073 848	0.073 849	0.073 850
22	0.073 857	0.073 858	0.073 859	0.073 860	0.073 861
23	0.073 868	0.073 869	0.073 870	0.073 871	0.073 873
24	0.073 879	0.073 880	0.073 882	0.073 883	0.073 884
25	0.073 890	0.073 892	0.073 893	0.073 894	0.073 895
26	0.073 902	0.073 903	0.073 904	0.073 905	0.073 906
27	0.073 913	0.073 914	0.073 915	0.073 916	0.073 917
28	0.073 924	0.073 925	0.073 926	0.073 927	0.073 928
29	0.073 935	0.073 936	0.073 937	0.073 938	0.073 940
30	0.073 946	0.073 947	0.073 948	0.073 950	0.073 951
31	0.073 957	0.073 959	0.073 960	0.073 961	0.073 962
32	0.073 969	0.073 970	0.073 971	0.073 972	0.073 973
33	0.073 980	0.073 981	0.073 982	0.073 983	0.073 984
34	0.073 991	0.073 992	0.073 993	0.073 994	0.073 995
35	0.074 002	0.074 003	0.074 004	0.074 005	0.074 007
36	0.074 013	0.074 014	0.074 015	0.074 017	0.074 018
37	0.074 024	0.074 026	0.074 027	0.074 028	0.074 029
38	0.074 036	0.074 037	0.074 038	0.074 039	0.074 040
39	0.074 047	0.074 048	0.074 049	0.074 050	0.074 051
40	0.074 058	0.074 059	0.074 060	0.074 061	0.074 062

**MERCURY AT  $t^{\circ}\text{C}$  TO CAPACITY ( $\text{cm}^3$ ) OF VESSEL AT  $27^{\circ}\text{C}$** expansion of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )

<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b><math>t^{\circ}\text{C}</math></b>
0.073 673	0.073 674	0.073 675	0.073 676	0.073 677	<b>5</b>
0.073 684	0.073 685	0.073 686	0.073 687	0.073 689	<b>6</b>
0.073 695	0.073 696	0.073 697	0.073 699	0.073 700	<b>7</b>
0.073 706	0.073 707	0.073 709	0.073 710	0.073 711	<b>8</b>
0.073 718	0.073 719	0.073 720	0.073 721	0.073 722	<b>9</b>
0.073 729	0.073 730	0.073 731	0.073 732	0.073 733	<b>10</b>
0.073 740	0.073 741	0.073 742	0.073 743	0.073 744	<b>11</b>
0.073 751	0.073 752	0.073 753	0.073 754	0.073 755	<b>12</b>
0.073 762	0.073 763	0.073 764	0.073 765	0.073 767	<b>13</b>
0.073 773	0.073 774	0.073 776	0.073 777	0.073 778	<b>14</b>
0.073 784	0.073 786	0.073 787	0.073 788	0.073 789	<b>15</b>
0.073 796	0.073 797	0.073 798	0.073 799	0.073 800	<b>16</b>
0.073 807	0.073 808	0.073 809	0.073 810	0.073 811	<b>17</b>
0.073 818	0.073 819	0.073 820	0.073 821	0.073 822	<b>18</b>
0.073 829	0.073 830	0.073 831	0.073 832	0.073 834	<b>19</b>
0.073 840	0.073 841	0.073 842	0.073 844	0.073 845	<b>20</b>
0.073 851	0.073 853	0.073 854	0.073 855	0.073 856	<b>21</b>
0.073 863	0.073 864	0.073 865	0.073 866	0.073 867	<b>22</b>
0.073 874	0.073 875	0.073 876	0.073 877	0.073 878	<b>23</b>
0.073 885	0.073 886	0.073 887	0.073 888	0.073 889	<b>24</b>
0.073 896	0.073 897	0.073 898	0.073 899	0.073 901	<b>25</b>
0.073 907	0.073 908	0.073 909	0.073 911	0.073 912	<b>26</b>
0.073 918	0.073 919	0.073 921	0.073 922	0.073 923	<b>27</b>
0.073 930	0.073 931	0.073 932	0.073 933	0.073 934	<b>28</b>
0.073 941	0.073 942	0.073 943	0.073 944	0.073 945	<b>29</b>
0.073 952	0.073 953	0.073 954	0.073 955	0.073 956	<b>30</b>
0.073 963	0.073 964	0.073 965	0.073 966	0.073 967	<b>31</b>
0.073 974	0.073 975	0.073 976	0.073 978	0.073 979	<b>32</b>
0.073 985	0.073 986	0.073 988	0.073 989	0.073 990	<b>33</b>
0.073 997	0.073 998	0.073 999	0.074 000	0.074 001	<b>34</b>
0.074 008	0.074 009	0.074 010	0.074 011	0.074 012	<b>35</b>
0.074 019	0.074 020	0.074 021	0.074 022	0.074 023	<b>36</b>
0.074 030	0.074 031	0.074 032	0.074 033	0.074 034	<b>37</b>
0.074 041	0.074 042	0.074 043	0.074 045	0.074 046	<b>38</b>
0.074 052	0.074 053	0.074 055	0.074 056	0.074 057	<b>39</b>
0.074 064	0.074 065	0.074 066	0.074 067	0.074 068	<b>40</b>

TABLE 4A

**MASS (GRAMS) OF MERCURY  
CONTAINED OR DELIVERED AT  $t^{\circ}\text{C}$   
BY A VESSEL OF CAPACITY  
1 cm<sup>3</sup> AT 27°C**

(Coefficient of cubical thermal expansion  
of glass  $10 \times 10^{-6}/^{\circ}\text{C}$ )

$t^{\circ}\text{C}$	0.0	0.5
5	13.580	13.579
6	13.578	13.577
7	13.576	13.575
8	13.573	13.572
9	13.571	13.570
10	13.569	13.568
11	13.566	13.565
12	13.564	13.563
13	13.562	13.561
14	13.559	13.558
15	13.557	13.556
16	13.555	13.554
17	13.553	13.551
18	13.550	13.549
19	13.548	13.547
20	13.546	13.544
21	13.543	13.542
22	13.541	13.540
23	13.539	13.537
24	13.536	13.535
25	13.534	13.533
26	13.532	13.531
27	13.529	13.528
28	13.527	13.526
29	13.525	13.524
30	13.522	13.521
31	13.520	13.519
32	13.518	13.517
33	13.515	13.514
34	13.513	13.512
35	13.511	13.510
36	13.509	13.507
37	13.506	13.505
38	13.504	13.503
39	13.502	13.500
40	13.499	13.498

TABLE 4B

**MASS (GRAMS) OF MERCURY  
CONTAINED OR DELIVERED AT  $t^{\circ}\text{C}$   
BY A VESSEL OF CAPACITY  
1 cm<sup>3</sup> AT 27°C**

(Coefficient of cubical thermal  
expansion of glass  $15 \times 10^{-6}/^{\circ}\text{C}$ )

$t^{\circ}\text{C}$	0.0	0.5
5	13.579	13.578
6	13.577	13.576
7	13.574	13.573
8	13.572	13.571
9	13.570	13.569
10	13.568	13.567
11	13.565	13.564
12	13.563	13.562
13	13.561	13.560
14	13.559	13.557
15	13.556	13.555
16	13.554	13.553
17	13.552	13.551
18	13.550	13.548
19	13.547	13.546
20	13.545	13.544
21	13.543	13.542
22	13.541	13.539
23	13.538	13.537
24	13.536	13.535
25	13.534	13.533
26	13.532	13.530
27	13.529	13.528
28	13.527	13.526
29	13.525	13.524
30	13.523	13.522
31	13.520	13.519
32	13.518	13.517
33	13.516	13.515
34	13.514	13.513
35	13.511	13.510
36	13.509	13.508
37	13.507	13.506
38	13.505	13.504
39	13.502	13.501
40	13.500	13.499

TABLE 4C

MASS (GRAMS) OF MERCURY  
CONTAINED OR DELIVERED AT  $t^{\circ}\text{C}$   
BY A VESSEL OF CAPACITY  
1 cm<sup>3</sup> AT 27°C

(Coefficient of cubical thermal expansion  
of glass  $25 \times 10^{-6}/^{\circ}\text{C}$ )

$t^{\circ}\text{C}$	0.0	0.5
5	13.576	13.575
6	13.574	13.573
7	13.572	13.571
8	13.570	13.569
9	13.567	13.566
10	13.565	13.564
11	13.563	13.562
12	13.561	13.560
13	13.559	13.558
14	13.557	13.556
15	13.555	13.554
16	13.553	13.552
17	13.551	13.549
18	13.548	13.547
19	13.546	13.545
20	13.544	13.543
21	13.542	13.541
22	13.540	13.539
23	13.538	13.537
24	13.536	13.535
25	13.534	13.533
26	13.531	13.530
27	13.529	13.528
28	13.527	13.526
29	13.525	13.524
30	13.523	13.522
31	13.521	13.520
32	13.519	13.518
33	13.517	13.516
34	13.515	13.514
35	13.512	13.511
36	13.510	13.509
37	13.508	13.507
38	13.506	13.505
39	13.504	13.503
40	13.502	13.501

TABLE 4D

MASS (GRAMS) OF MERCURY  
CONTAINED OR DELIVERED AT  $t^{\circ}\text{C}$   
BY A VESSEL OF CAPACITY  
1 cm<sup>3</sup> AT 27°C

(Coefficient of cubical thermal expansion  
of glass  $30 \times 10^{-6}/^{\circ}\text{C}$ )

$t^{\circ}\text{C}$	0.0	0.5
5	13.574	13.573
6	13.572	13.571
7	13.570	13.569
8	13.568	13.567
9	13.566	13.565
10	13.564	13.563
11	13.562	13.561
12	13.560	13.559
13	13.558	13.557
14	13.556	13.555
15	13.554	13.553
16	13.552	13.551
17	13.550	13.549
18	13.548	13.547
19	13.546	13.545
20	13.544	13.543
21	13.542	13.541
22	13.540	13.539
23	13.538	13.537
24	13.535	13.534
25	13.533	13.532
26	13.531	13.530
27	13.529	13.528
28	13.527	13.526
29	13.525	13.524
30	13.523	13.522
31	13.521	13.520
32	13.519	13.518
33	13.517	13.516
34	13.515	13.514
35	13.513	13.512
36	13.511	13.510
37	13.509	13.508
38	13.507	13.506
39	13.505	13.504
40	13.503	13.502





**AMENDMENT NO. 1    JANUARY 2006**  
**TO**  
**IS 8897 : 1978    TABLES FOR CALIBRATION**  
**AND METHOD OF VERIFICATION OF VOLUMETRIC**  
**GLASSWARE**

( *Page 3, Foreword, clause 0.4* ) — Insert the following at the end of the clause:

‘The coefficient of cubical expansion is the increase in volume per unit volume for 1°C rise in temperature. For ordinary work it is assumed that the coefficient of cubical expansion is about three times the coefficient of linear expansion.’

( CHD 10 )